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ABSTRACT

Trends in assessment and certification of generic skills in vocational education and training (VET) across Australia were examined. Data were collected through the following activities: a literature review; semi-structured interviews with managers of assessment and teachers and learners in six registered training organizations across Australia; and a desktop audit of training packages. The study established wide variations in the coverage of generic skills in training packages and in the approaches taken to assessing their mastery. The following recommendations were offered: (1) augment national VET policy to include a framework for reporting and certification of generic skills; (2) allocate funds to support full implementation of needed policy revisions; (3) promote generic skills to stakeholders more broadly; (4) further develop training packages and assessment resources to help practitioners conduct effective generic skills assessment; and (5) offer professional development programs to practitioners to build their skills and knowledge about delivery and assessment of generic skills. (Eight tables/figures/boxes are included. The bibliography lists 35 references. The following items are appended: the interview schedule and protocols; an overview of the study methodology; results of the desktop audit of training packages; a list of generic skills identified by informants; Mayer's three levels; and a overview of the Centerlink mapping approach.) (MN)

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Assessing and certifying generic skills

What is happening in vocational education and training?

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<ABST>Trends in assessment and certification of generic skills in vocational education and training (VET) across Australia were examined. Data were collected through the following activities: a literature review; semi-structured interviews with managers of assessment and teachers and learners in six registered training organizations across Australia; and a desktop audit of training packages. The study established wide variations in the coverage of generic skills in training packages and in the approaches taken to assessing their mastery. The following recommendations were offered: (1) augment national VET policy to include a framework for reporting and certification of generic skills; (2) allocate funds to support full implementation of needed policy revisions; (3) promote generic skills to stakeholders more broadly; (4) further develop training packages and assessment resources to help practitioners conduct effective generic skills assessment; and (5) offer professional development programs to practitioners to build their skills and knowledge about delivery and assessment of generic skills. (Eight tables/figures/boxes are included. The bibliography lists 35 references. The following items are appended: the interview schedule and protocols; an overview of the study methodology; results of the desktop audit of

Executive summary

Assessment and certification of generic skills is an essential aspect of the current research focus on the place of such skills in Australian vocational education and training (VET). This research, therefore, set out to gauge practitioners' understandings of generic skills and the ways in which they incorporate the delivery and assessment of these skills into their training programs. At the same time, it was important to determine the critical elements of effective assessment of these skills.

In the initial phases of the study a review of current literature was undertaken and a desktop audit of training packages was conducted. Semi-structured interviews were then conducted with managers of assessment and teachers and learners in six registered training organisations across Australia. This sample included three large public registered training organisations, a rural adult and community education (ACE) provider, two senior secondary colleges delivering VET-in-schools programs and a large Commonwealth Government agency. The informants to the study were delivering a range of training package qualifications in both on- and off-the-job training environments. It should be noted that the learner perspective in the study should be treated with caution since it is based on only six students.

The desktop audit of training packages revealed that, apart from the Mayer key competencies,[1] which are included in tabular form in every unit of competency, other generic skills are included as discrete units of competency, as elements of competency, or as performance criteria. They are also embedded within vocational units of competency. Thus, while generic skills may be quite explicit in some cases, they are implicit in many more. This variation in coverage within training packages has a direct and sometimes negative bearing on practitioners' understandings of generic skills, and the approaches they take to assessing them.

Such variation has inevitably generated inconsistent outcomes in their delivery and assessment. This is evident in the cases examined in this study. Informants acknowledged that they are uncertain about the best strategies for dealing with generic skills and suggested that clearer definitions, assessment guidelines and supporting resources would make them more confident about their own approaches to delivering and assessing them.

The language associated with the concept of generic skills is quite complex and there is no real agreement as to what constitutes these skills, let alone how to validly and reliably recognise them in practice. It is evident that practitioners do not speak, or think, about generic skills in the same terms.

While some literature questions the transferable nature of generic skills, the informants to this study were broadly convinced that it is in their transferability that the value of generic skills lies.

1 The Mayer key competencies are: collecting, analysing and organising information; communicating ideas and information; planning and organising activities; working with others and in teams; using mathematical ideas and techniques; solving problems; and using technology.

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Further, they considered that generic skills are valued by industry because of the crucial role they play in competent workplace performance. There is a strong sense, however, that while employers can and do provide technical skill development, they are reluctant or unable to take on the task of building the generic skills of their employees. Thus, there is a clear imperative for practitioners to ensure that generic skills are included in the training that they provide. The informants also suggested that the lack of clear definition hampers the promotion of these skills to industry, employers and employees. And, despite the general consensus that generic skills are valuable, practitioners are unclear as to how they should be assessed.

The Mayer key competencies are an important articulation of generic skills. They have been included in training packages from the outset, and thus it is opportune to determine how practitioners have delivered and assessed them. In most of the cases, the key competencies were being integrated into other competencies. As a consequence, they were being assessed holistically as part of the overall assessment of vocational competencies; that is, their achievement has been inferred rather than explicitly measured.

In only one instance were the key competencies being directly assessed and reported on, utilising a set of agreed benchmarks of performance for each of the three Mayer key competency levels. In this example, the opportunities for the assessment of these competencies were being identified within real work tasks generated from vocational units of competency. Even though the key competencies were not assessed separately, judgements about their achievement were explicit. Learners were provided with clear guidelines on the evidence required for assessment at each level, and were actively encouraged to determine their own readiness for that assessment.

The research also sought to establish the extent to which broader generic skills were being addressed in training programs. Several of the case study sites have recognised the need to address broader generic skills by formulating sets of what they call 'shared behaviours', 'core competencies' or 'professional skills'. Generally, however, they are still inferring the achievement of these skills from performance in vocational activities.

Informants from two organisations have committed considerable time and resources to the development of comprehensive strategies for the assessment of generic skills. They have also placed great emphasis on the information that they provide to their learners. The methods being used by most of the practitioners to assess generic skills, however, are clearly no different from those being used for any other VET assessment.

In relation to recording, reporting and certifying generic skills, none of the organisations has established formal systems to achieve this. A considerable amount of generic skills assessment, therefore, is going unreported in those instances where those skills are being inferred but not recorded, reported or certified. In one instance, however, an informal system for certifying key competencies is in place, and learners are provided with a statement of attainment outlining key competency achievement at the various levels. This documentation is being used by learners as supplementary evidence to their formal academic records and testamurs.

The lack of formal reporting is largely due to the fact that there is no national policy to underpin the formal recognition and certification of generic skills. More importantly, there are significant administrative and financial disincentives working against the implementation of a formal reporting system. The first is the requirement to modify existing student information management systems to allow for the reporting of generic skills results, and the second is how additional enrolment requirements that might be required can be financed.

What factors are critical in the assessment of generic skills? In the main, these do not differ from those required for any valid, reliable, flexible and fair assessment. The issues are very similar to those constantly raised by practitioners discussing competency-based assessment in general, and do not constitute anything which is unique to the assessment of generic skills. However, because

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generic skills are less explicitly described in training packages and key competency levels are difficult to determine, there is considerable potential for invalid judgements to be made about the quality of learner performance.

Therefore, it is not surprising that informants called for better information to support assessment decision-making (such as guidelines for evidence collection, including the delineation of performance requirements or benchmarks) to ensure consistency across assessors and across and between registered training organisations. It is also crucial that assessors themselves understand what generic skills are and know how they might be demonstrated. Without such understanding, it is unlikely that effective delivery and assessment will occur.

Informants also consistently commented that specific resources and funding need to be dedicated to the assessment of generic skills to enable it to be done properly. They saw that delivery and assessment had to be flexible to ensure that there were many opportunities for learners to be assessed in their achievement of generic skills.

Many informants identified the importance of the learner's role in generic skills learning and assessment. Some placed considerable emphasis on providing well-designed, clearly articulated, comprehensive and readily accessible information to learners, assessors, employers and other stakeholders on generic skills and how they might be demonstrated and assessed. Such information can raise levels of awareness and result in a greater level of commitment by learners and teachers to the recognition of these skills.

The implications of these findings are clear. There is a need to formally certify generic skills. For generic skills to be accepted by all VET stakeholders as a critical component of training, they must be actively promoted as valuable competencies to achieve. If their importance were formally recognised and certificated, then learners would be more motivated to acquire generic skills. Moreover, it would assist employers if learners' attainment of these skills were more clearly described.

Practitioners also need clear directions as to which generic skills should be fostered and assessed, and how this should be accomplished. This requires a revision of the way that generic skills are incorporated into training packages, to make them more explicit. As well as improving the level of guidance to practitioners, such a revision would also help to minimise inconsistent generic skills assessment.

However, VET practitioners also require further professional development support in order that their own skills, knowledge and attitudes are sufficient to enable them to deliver and assess generic skills.

Therefore, the study suggests that:

- national VET policy be augmented to include a framework for the reporting and certification of generic skills
- funding be allocated to support the full implementation of such policy revision
- generic skills be more broadly promoted to key stakeholders
- training packages and assessment resources be further developed to assist practitioners to conduct effective generic skills assessment
- professional development programs be offered to practitioners to build their skills and knowledge about the delivery and assessment of generic skills.

These actions would confirm the central role that generic skills have to play in vocational education and training in Australia now and into the future.

Introduction

Background

The status of generic skills within vocational education and training (VET) is currently the subject of much research interest and popular discussion in Australia and overseas. Variously conceptualised as key skills, core skills, essential skills, necessary skills and employability skills, generic skills are widely discussed, but not well understood.

With new technologies and the shift to knowledge-based and globalised economies, it is beginning to be broadly accepted that the contemporary workplace is characterised by (rather than merely subject to) continuous change. One impact of this transformation is that lifelong learning has been identified as a means of maintaining employability in the new economy. It is widely believed that such dimensions of performance as learning, innovation and enterprise can be enhanced by placing greater emphasis on generic skills within the training process.

Contemporary Australian research in this area of the VET sector is examining generic skills as they are understood and valued by key stakeholders—employers, workers, learners and trainers and assessors. In an environment in which such skills are considered worthwhile, but difficult to determine, the question as to how they may be assessed and certified is one which must be explored.

Aims

The purpose of this research was to investigate how generic skills are being assessed and certified in practice, and accordingly, to provide a study of current practice to complement existing Australian studies of generic skills such as Moy's consolidation study (Moy 1999) and Kearns's review of research (Kearns 2001).

The goals were to:

- investigate the nature of generic skills as they are commonly defined and understood in contemporary Australian and international VET contexts
- ascertain how generic skills are identified within training packages and accredited courses and the extent to which generic skills are embedded into such documentation
- explore practical and applicable ways in which trainers and assessors are incorporating the assessment and certification of those skills into their programs
- determine the critical elements of effective assessment of generic skills
- discuss the implications for the Australian VET system of the increased emphasis being given to the role of generic skills.

Methodology

The project employed a qualitative methodology to address the research questions, adopting a case study approach to the investigation of six sites of generic skills assessment (see appendix 2). This research method was chosen because 'case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context' (Yin 1994). A multiple-case design was employed so that relationships between factors could be developed.

The information for this study was sourced, first, from an initial review of literature relating to the assessment and certification of generic skills. The second and major source of information was generated from primary research involving interviews with a range of staff and learners from six registered training organisations concerned with the assessment and certification of generic skills. Accessibility to documentation and the willingness and availability of key stakeholders to participate were prime considerations in the selection of case study sites.

Semi-structured interviews were conducted with a total of seven managers of assessment, 14 teacher/trainer/assessors and six learners from registered training organisations located in New South Wales, the Australian Capital Territory, Victoria and South Australia. (The interview schedules and associated protocols are attached at appendix 1.) They included large public registered training organisations, a rural community-based adult and community education (ACE) training provider, senior secondary colleges delivering VET-in-schools programs and a large Commonwealth Government agency which has a significant enterprise-based training system. The rationale for site selection is included in a fuller description of the methodology at appendix 2.

This project intended to build on recent research into the definitional status of generic skills (for example, Moy 1999, Kearns 2001), and to work in concert with other contemporary research being conducted in the same area. The main focus of this study was on the key competencies identified by Eric Mayer (Mayer 1992) because they are represented in this form in training packages. At the same time, the extent of stakeholder understanding of broader concepts of generic skills implicit in many units of competency was also explored.

While the focus of the study was on practitioner engagement with generic skills, the views of a number of learners were also sought. As a total of only six learners in three of the organisations (Centrelink, Spencer Institute of TAFE and Torrens Valley TAFE) agreed to participate, the information provided was somewhat limited. The views of these learners are presented in the section entitled 'Learner perspectives on generic skills'.

It must also be noted that the views and perceptions of the seven managers of assessment, fourteen teacher/trainer/assessors and six learners interviewed during the case study site data collection are their own, and do not necessarily reflect the views of their organisations as a whole. In addition, as with all organisations, the operations of any single area within the organisation should not be expected to necessarily typify the operations of the organisation as a whole.

A snapshot of organisations and their approaches to generic skills

The six registered training organisations included in this study provide a snapshot of the diversity of VET delivery in Australia. Centrelink delivers training totally on the job, while the Torrens Valley TAFE program examined in the research delivers training almost entirely off the job. Both of these organisations have a clearly articulated and documented approach to the delivery and assessment of generic skills. The Campaspe College of Adult Education, Spencer Institute of TAFE, Burnley College Campus of the University of Melbourne, and the Australian Capital Territory senior

secondary colleges are actively engaging in the delivery and assessment of generic skills, but in less sophisticated ways. All of these registered training organisations are at various stages in the development of their approach to generic skills which are influenced by their organisational missions, philosophies, and modes of delivery.

Centrelink

Centrelink is a large Commonwealth Government instrumentality which provides training for its 23 000 employees across Australia. The organisation takes a centralised approach to the formulation of learning and assessment strategies, and incorporates generic skills across all facets of its training. Generic skills are an intrinsic part of the enterprise-defined Centrelink 'shared behaviours'.

The Centrelink informants to this project included two manager–assessors, two assessors and three learners involved in the delivery of the Business Services and Telecommunications (Call Centres Sector) Training Packages.

Community services and health, Spencer Institute of TAFE

Spencer Institute of TAFE is a large public registered training organisation in South Australia which caters for the training and further education needs of people within the region through a network of 17 campuses and numerous study centres.

The informants to this project were three teacher–assessors within the community services and health team providing a flexibly delivered program in the Diploma of Community Services (Children's Services), and two learners. The program is conducted utilising learning guides and work placements, and is supported by individual tutors.

Spencer Institute of TAFE informants address generic skills in a range of ways, one of which is to assess against performance criteria which are termed 'professional skills'.

Electronics and information technology, Torrens Valley TAFE

Torrens Valley TAFE is a large public registered training organisation in South Australia which has flexible learning as one of its five strategic priorities for 2001 to 2005. Part of this involves ensuring that 'students have choices in what, where, when and how they learn and opportunities to develop key competencies'.

In line with this priority, the electronics and information technology section has implemented a comprehensive strategy for identifying, assessing and certifying the Mayer key competencies. The program at Torrens Valley TAFE follows a modular curriculum mapped to the units of competency in the Electrotechnology Industry Training Package. Training is largely off the job with some work placements. The informants to the study were the key competencies co-ordinator (who is also an assessor), two teacher–assessors and one learner.

Burnley College, University of Melbourne

Burnley College is a major provider of horticultural education and training in Australia, offering degree, diploma and postgraduate programs as well as an extensive range of vocational and short courses.

Burnley College delivers modules which are based on units of competency from the Horticulture Training Package. They have identified an additional eight core competencies that are grounded in generic skills.

The manager of the teaching area and two teacher–assessors provided the information about the Burnley College approach.

ACT senior secondary colleges

The senior secondary system in the Australian Capital Territory focusses on Years 11 and 12. It provides a variety of general and vocational courses designed to prepare students for further education or to enter the workplace.

The senior secondary colleges develop their own vocational courses, based on training packages, and each college is a registered training organisation. However, as the information from the two colleges has been collated as one set of responses for the purposes of this study, the two colleges are treated as a single registered training organisation in this report. Students are assessed for the Year 12 certificate as well as for competency within VET-in-schools programs. There is no direct assessment of generic skills in the Australian Capital Territory approach, but achievement is inferred from successful achievement of vocational and general skills.

The informants to the study were two manager–assessors and three teachers delivering VET-in-schools programs in two of the eight publicly funded colleges in the Australian Capital Territory.

Campaspe College of Adult Education

The Campaspe College of Adult Education is an ACE provider that has offered programs in Echuca and the surrounding district for 21 years. The college delivers training package qualifications in hospitality, tourism, information technology, retail operations, business and community services (children's services). The college adopts a modular approach to training, and direct assessment of generic skills only occurs when the units of competency are discrete or explicit.

The informants at Campaspe comprised a manager–assessor and two teachers.

Literature review

Background

Since the early 1990s when the Mayer Committee was formed to develop the concept of employment-related key competencies in response to the recommendations of the Finn report (Finn 1991), generic skills have been firmly on the Australian education agenda. The committee's report, *Key competencies* (Mayer 1992), crystallised much of the current thinking about generic skills and provided a framework for their incorporation into training.

At around the same time in the United States of America, initial studies which had identified 16 key skills were consolidated by the influential Secretary's Commission on Achieving Necessary Skills (SCANS) which categorised generic skills as 'workplace competencies' and 'foundation skills'. Its use of the term 'workplace know-how' and the title of its report, *What work requires of schools*, were echoed the following year by Mayer's similar focus on these skills as non-technical prerequisites for employment (Secretary's Commission on Achieving Necessary Skills 1991).

Indeed, the current focus on 'employability' was prefigured by Mayer, who pointed out that his committee's choice of the phrase, *Putting general education to work* as the title of the condensed version of their report, was intended to be indicative of their view that these competencies were 'essential for effective participation in the emerging patterns of work and work organisation across industries and occupations' (Mayer 1992, Foreword).

Meanwhile in Britain, the term 'key skills' was introduced to describe skills which were defined as being generic and transferable—skills that people could learn and develop in a wide variety of situations (Kelly 2001). A national 'key skills qualification' was introduced that focussed on effective communication, application of number and the use of information technology as 'main' key skills, and working with others, improving own learning and performance, and problem-solving as 'wider' key skills.

In 1993, the New Zealand Curriculum Framework adopted the term 'essential skills' for those skills that were defined as fundamental for learners in achieving their full potential and participation in society. Importantly, it was assumed that, while these skills may be developed in different ways and learning environments, they would be transferable to new situations (New Zealand Ministry of Education 1993).

Ten years on, generic skills are again at the forefront of educational policy agendas around the world. In Europe, the Organisation for Economic Co-operation and Development-sponsored *Definition and selection of competencies: Theoretical and conceptual foundations* (DeSeCo) project, is exploring, in part, the theoretical foundations, rationale and selection processes behind sets of key competencies (Organisation for Economic Co-operation and Development 2000). In Australia, the Australian Chamber of Commerce and Industry and the Business Council of Australia's report, *Employability skills for the future* (Australian Chamber of Commerce and Industry & Business Council of Australia 2002), concerns itself with generic skills recast as employability skills.

Defining generic skills

From country to country, the terminology used to refer to generic skills differs. As we have seen, the range of terms includes: 'key competencies', 'soft skills', or 'employability skills' (Australia); 'key skills' or 'core skills' (United Kingdom); 'essential skills' (New Zealand); and 'necessary skills', 'employability skills' or 'workplace know-how' (United States).

The choice of term is telling. The difference between referring to a skill as 'soft' and referring to it as 'essential' is hugely significant in political terms. Indeed, while generic skills have suffered by definitional confusion, the most damaging label of all has been that of 'soft skills', with its connotations of imprecision and unimportance. Little wonder that they have not been better promoted.

However, where thoughtful analysis has been applied to the nature of 'soft skills', their centrality to competence has been readily appreciated. Costin argues that 'the appropriate and skilful application of hard skills is soft skill dependent' (Costin 2002, p.5). He categorises hard skills as being those associated with 'product' and the 'individual', while soft skills are those of 'process and community'. Warning against being too ready to dichotomise the two, he proposes a soft skill–hard skill continuum. Such a model makes it easier to comprehend the territory in which soft and hard skills blur, meld and work together.

The variation referred to above is symptomatic not only of regional differences, but also of the apparently universal confusion as to which particular skills should comprise the generic skill set. The set of skills articulated by Mayer as key competencies is comprehensive, but not exhaustive, and the years since their publication in 1992 have seen such profound changes in the nature of Australian workplaces and in Australians' perceptions about the nature of work itself, that it is not surprising that there are now calls that Mayer's set be expanded. Additional skills, attitudes and values that facilitate employability are now considered essential. They can include: self-management; innovation, creativity and initiative; the ability to perform in a changing environment; the ability to manage one's own learning; valuing ethical behaviour; and cultural awareness. Many management skills, including leadership and project management skills are also widely regarded as 'generic'. Skills such as the ability to conduct research and to train others are also increasingly regarded as desirable in the workplace and have made their way into some training packages.

It is not surprising, therefore, that much of the literature reveals a preoccupation with defining generic skills. However, there is an apparent reluctance or an inability to move beyond definitional issues into those areas which are contingent upon the definitions in question: the teaching, learning, assessing and certifying of generic skills.

Generic skills in Australian vocational education and training

In the Australian vocational education and training (VET) context, there is broad acceptance of, and even enthusiasm for, the importance of generic skills, despite some chronic difficulties with the key competencies. Many submissions supporting their status were made to a recent Senate Committee conducting an inquiry into VET (Senate Employment, Workplace Relations, Small Business and Education References Committee 2000). The committee made three recommendations which were directly related to the place of key competencies in training packages (Recommendations 15, 16 and 17, pp.xxx–xxxiii), and yet nowhere was the assessing or certifying of these competencies addressed.

This deficit is symptomatic of the recurring challenges which generic skills (in their various guises) have posed to the Australian VET community since the Mayer Committee proposed that certain generic skills (or key competencies) should form the core of all vocational education and training.

Mayer laid down comprehensive guidelines as to how assessment and reporting of learners' achievement of key competencies should be approached. The classic principles of validity, reliability, fairness and flexibility form the foundation of these guidelines. In addition, he insisted that achievement of the key competencies be assessed against nationally agreed performance levels so that assessors would have a common reference point for assessment; that the relationship between learning and assessment must be clear to both assessors and learners; that assessment should provide the opportunity for both assessors and learners to reflect upon their own practices; that assessment of achievement of key competencies should be undertaken in an integrated fashion with other assessments; and finally, that there would be training and resourcing implications for the VET sector in its implementation of key competencies (Mayer 1992).

While Mayer's claims about the importance of these skills have not been overtly disputed, the system-wide implementation that the committee recommended has been thwarted by continued failure to adequately support the necessary professional development and resourcing requirements. Over the years, several researchers have reiterated the claim that professional development of VET practitioners will be necessary before any further progress can be made in the teaching and learning of generic skills, most particularly in those key skills which are seen as fundamental to successful participation in the new economy (Dawe 2002; Down 2000; Down & Figgis 2000; Kearns 2001; Moy 1999).

In 1999, Moy reviewed the research on generic skills that had been published in the previous five years, focussing on that which had been conducted in Australia post-Mayer. She reported that researchers had found little evidence that Mayer's three performance levels were being used; that in the field, the preferred mode of assessment was to integrate key competencies with vocational ones; that VET practitioners and industry representatives favoured the use of descriptive reporting formats; and that 'multiple sources of evidence which provide information on the context of the activity and its complexity', such as portfolios, were also preferred. A further advantage of using portfolios was perceived to be the prompt to learners to reflect upon and monitor their own skill attainment (Moy 1999, p.33). Interestingly, our review appears to provide evidence of what could be termed a 'naturalisation' of generic skills in the field; that is, that practitioners were adopting those parts or aspects of them with which they were comfortable, and incorporating them into their practice and their programs, but ignoring those aspects that they found difficult.

In her survey of the place of generic skills in training packages, Dawe observed that, while it may be considered that the current focus on generic skills is sufficient, this should not mean that this focus did not need to be re-examined in future reviews. In particular, she noted that work attitudes, values and ethics might need to be more explicitly articulated, as is already the case in large enterprises (especially those which see themselves as learning organisations). 'It is also apparent that enterprises base recruitment decisions primarily on personal attributes and generic skills' (Dawe 2002, p.71). Dawe suggests that not only do learning and assessment strategies need to be appropriate, but also that teachers need to maintain links with industry (particularly by means of partnerships) and with their own graduates in order to stay in touch with what personal attributes, values and attitudes employers are looking for.

Dawe's observations of the value attached by employers to generic skills are supported by Field and Mawer's study in which they explored 'high performance workplaces'. Here they found that 'general skills such as those represented by the key competencies ... [were] increasingly regarded as routine technical skills' (Field & Mawer 1996, p.20). In other words, in these workplace settings, generic skills were being reconceptualised and redefined as 'essential' and 'necessary' (and thus, increasing in status). A further implication of this redefinition is that, by being likened to the 'technical' skills against which they have traditionally been opposed, generic skills must, by corollary, be likewise vocationally fundamental, itemisable and teachable.

However, in much of this research, the difficult questions relating to assessing and certifying generic skills remain unaddressed. One of the definitive studies in the field, which claims that

there is clearly a need to align teaching and learning strategies for the generic skills with the national promotion of flexible learning, the role of modern learning technologies and meeting the skills needs of the information economy...' (Kearns 2001, p.58), does not establish just how this alignment will be facilitated. Further, the question of how such skills should be assessed is not addressed. Even the most recent and influential of the reports (that of the Australian Chamber of Commerce and Industry and the Business Council of Australia) produced in Australia appears, according to Comyn, 'to have been more focussed on issues of definition rather than the arguably more important questions of assessment and reporting' (Comyn 2002, p.5).

Generic skills in Australian higher education

Generic skills are also currently a prominent issue of concern within higher education in Australia. Since 1999, when the Australian Council for Educational Research developed the Graduate Skills Assessment (GSA) test, several Australian universities have become actively engaged in promoting the importance of such skills to their students, encouraging them to develop portfolios that illustrate generic skills acquisition during the course of their university education.

The consortium of universities which comprise the Australian Technology Network[2] has conducted a substantial investigation into the nature of those graduate attributes which they term 'generic capabilities': 'those attributes that go beyond the disciplinary expertise or technical knowledge ... the qualities that also prepare graduates as agents for social good in an unknown future'. The project suggests that a student-centred approach is fundamental to the implementation of generic capabilities programs, and provides resources for staff who want to develop such programs (Bowden et al. no date).

Many university websites now include material on generic skills, and two of the best of these (James Cook University and Edith Cowan University) could well serve as models that could be adopted and adapted within the VET sector.

Transferability

Much debate about generic skills centres on the question as to their transferability, the principle of genericism being profoundly and intimately linked to that of transfer.

Indeed, the issue of how best to teach, assess and certify the acquisition of generic skills begs the question of the existence of such skills, an existence that is contested by some in the field of educational research. The claim that such skills are transferable is the plank upon which their place in post-compulsory education rests, and it is this claim which is most problematic for those who do not agree that transferability is even possible. Hyland and Johnson, for example, critiquing Britain's adoption of 'key skills', contend that 'such skills are without philosophical or empirical support and are entirely illusory' (Hyland & Johnson 1998, p.163). They question the focus and expenditure on transferable skills in vocational education and training, while acknowledging that the appeal of the existence of such skills is understandable:

> Belief in these entities is based on wishful thinking; transferable skills hold out the promise of producing a flexible and adaptable workforce, and of solving problems associated with training people for an uncertain future. (Hyland & Johnson 1998, p.170)

In Australia, Stevenson reiterates this position, arguing that so-called generic skills are in fact highly specific, context-bound capacities. Stevenson refers to a substantial body of work in cognitive theory that presents us 'with considerable evidence that knowledge is highly situated in the context in which it is developed, and is difficult to transfer to other situations' (Stevenson 1999, p.4).

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2 RMIT University, Queensland University of Technology, University of Technology, Sydney, University of South Australia and Curtin University.

Indeed, Bagot contends that the Mayer report failed to 'come to grips with the issue of transferability, even though this is fundamental to the importance of Key Competencies in employment and training' (cited in Cornford 2001, p.144). Cornford himself adds that 'there appeared to have been no real recognition of what was needed to operationalise the concepts into effective [teaching and learning] practice' (Cornford 2001, p.144). He claims that not only do teachers and trainees need to be trained to increase the likelihood of learning transfer, but so must business and industry be educated as to 'their role in assisting transfer of learning' (Cornford 2001, p.146). That this has not happened he attributes to a failure by education policy-makers.

> Perkins and Salomon's (1989) analyses of high and low road transfer highlight the need for teachers and trainers to train explicitly for problem solving and transfer. There is little evidence in Australian policy making of effort to establish a high enough knowledge and skills basis for teachers and trainers to be equipped with sufficient knowledge to achieve these goals. A Certificate IV in Workplace Training and Assessment [sic], which has become the de facto basic teaching/training qualification requirement, is certainly not sufficient. (Cornford 2001, p.147)

Cornford reminds us to distinguish between 'near' and 'far' transfer. While there is ample evidence for the success of the former, he says, it is the latter (high-level, difficult to achieve, and insufficiently researched) that appeals to policy-makers (Cornford 2001, p.145).

Given the task by the Australian National Training Authority (ANTA) of evaluating the issues surrounding the concept of 'underpinning knowledge' in training packages, Down and Figgis deemed it necessary to reframe the concept as 'embedded knowledge', so problematic did they find the notion that such knowledge could be discrete and separated from practice. To regard certain knowledge necessary to competent practice as 'embedded' rather than as 'underpinning', also accommodated the emergent nature of such knowledge (Down & Figgis 2000). They claimed that 'Embedded knowledge is dynamic, related to but not limited by the boundaries of knowledge learned in becoming competent' (Down & Figgis 2000, p.135).

Tennant, on the other hand, argues that transfer is possible 'if the concept of transfer adopted allows the possibility of some learning and assistance in the new or "transfer" situation' (Tennant 1999, p.165). He concludes his paper with suggested 'strategies for enhancing transfer', but although one of these is that 'learn[ing] how to learn from experience' must be facilitated—that is, that learners must have 'practice in analysing experience and developing strategies for learning'—the ways in which formative assessment itself can serve this essential function of facilitating reflective practice (hence learning) are not canvassed.

Certainly, when transfer is questioned, the keenest dilemma is posed to those given responsibility for the assessment of such skills. Misko concludes her review of research into transfer by suggesting that there is 'a case for the *explicit* teaching of transfer skills ...' (Misko 1995, p.36, emphasis in original). She suggests that this is facilitated by teachers articulating the usefulness and transferability of the skills they are teaching, rather than leaving students to infer such things for themselves. She concludes:

> It is also important for teachers of vocational education to understand that spontaneous or uninformed transfer is difficult to achieve. It is also necessary to know that where it does happen it is helped along by having tasks which are perceived as being similar because they evoke similar goals and procedures, or because they can be solved using a set of generalised rules that have been learned in the initial training task. (Misko 1995, pp.36–7)

The implications of this for the design and application of tools and methods to be used in the assessment of generic skills are not teased out in this publication, but may be readily inferred. It must also be concluded that professional development of practitioners will be required to enable them to be equipped to facilitate such meta-cognition in their students.

Implications for practitioners

While academic debates as to the realisability of transfer continue, for those for whom the dilemmas around generic skills are not so much existential as practical, the persistent questions remain: 'How do we recognise generic skills? How do we teach them? How do we assess them? How do we certify that learners have attained them?'

Some of these questions are answered by the *Training package development handbook* (ANTA 2001), which addresses the implicitly recognised difficulties that training package developers can have in the identification, teaching and assessment of the key competencies. The handbook stresses the importance of integrating the key competencies 'into the design, customisation, delivery and assessment of vocational education and training programs' (ANTA 2001, p.4) and provides models of such integration in practice. It suggests the following five strategies:

1. Use the Key Competencies to develop appropriately framed performance criteria within a unit of competency (i.e., inclusive performance criteria)
2. Ensure that the Range Statement reflects the holistic nature of the unit of competency (i.e., inclusive range statements)
3. Specify a variety of methods and modes for the collection of assessment evidence (i.e., variety of evidence)
4. Ensure that the unit of competency is written as a holistic performance outcome (i.e., holistic units of competency)
5. Ensure that the language used is sufficiently explicit to reflect workplace performance (i.e., use of appropriate language). (ANTA 2001)

Were this advice more broadly disseminated to teachers and trainers who share the above-mentioned conceptual and practical difficulties, there might be fewer problems with generic skills in the field. However, the 'conscious and deliberate effort' which is required to make key competencies explicit throughout the training process is obviously predicated on a sound understanding on the teacher's or trainer's part, not only of the nature of key competencies themselves, but also of the multitude of ways in which their achievement can be facilitated. The handbook can only go so far in suggesting strategies and supporting them with examples. Beyond this, teachers and trainers must exercise their own professional competencies.

This brings us back to the recurrent need for professional development of VET teachers and trainers, a need that has been reiterated by several researchers in this field over many years. The Mayer Committee noted the importance of training in this context (Mayer 1992). Down and Figgis commented on the need for 'sophisticated professional development' to enable VET practitioners to firstly, recognise embedded knowledge in training packages, and further, 'build it into effective learning paths and assessment strategies' (Down & Figgis 2000, p.137). Elsewhere Down has also noted, in relation to the implementation of training packages, that practitioners must be supported to make the changes required of them, particularly when that change requires the application of greater levels of training and assessment expertise at a time when there are fewer dollars to support resource development (Down 2000).

An interesting study conducted by Soden and Pithers proposed that teaching students metacognitive skills would enhance their abilities to apply problem-solving strategies. The authors claim that there is 'a huge body of empirical evidence that connects deeper understanding of subject matter with superior vocational problem-solving competence' (Soden & Pithers 2001, p.206). The research explicitly avoids the debate on transferability, advocating instead a focus on modifying vocational instruction to enhance students' capabilities, and indeed, to develop a 'thinking workforce' (Soden & Pithers 2001, p.219). Although 'problem-solving' was nominally included in the program being taught by the teachers who were the study participants, the learning outcomes specified only that certain procedures be followed. The study participants redesigned the

assessment tasks so that students were required to think through problems typical of those they might expect to find in the workplace.

Although the study does not reflect on this fact, this tells us more about the generic skills of the *participants* than it does about the skills being fostered in their students. In other words, it was the practitioners who interpreted the program requirement that a certain generic skill be addressed by exercising the same skill (problem-solving) themselves. It is possible to speculate that the 'thinking workforce' being cultivated here was primarily the teaching workforce and only secondarily, the vocational one composed of their students.

Certainly for teachers and trainers, their 'vocational problem-solving competences' are called into play as they grapple with generic skills. It is not, however, sufficient that such skills be named as components of a necessary package of competencies. How to recognise, teach, assess and certify these skills must also be addressed.

The challenges of assessing and certifying generic skills

Before considering how to assess and report on generic skill attainment, it is useful to reflect upon the purposes of such assessment. There are three stakeholder groups with interests in generic skills assessment: students (who want the evidence for themselves and their own lifelong learning agenda); employers (who want to know that students have attained employability skills); and the teaching institutions from which the students have graduated (which want to be able to defend their claims to producing graduates with certain skill sets) (Cummings 1998).

Reynolds and Mackay acknowledge that there are both 'conceptual and technical issues' associated with giving increased importance to generic skills. They claim that:

> What we therefore need is a model of generic skills assessment and reporting which achieves a new synthesis of traditional definitions and allows previously low profile (or soft skills as they are sometimes referred to) to be fore-grounded. The problem is not so much a curricular one or even a question of teaching and learning so much as an issue of assessment and reporting. (Reynolds & Mackay 1997, p.6)

They go on to evaluate the advantages and disadvantages of the various models of assessment and reporting that the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) working party report of 1997 proposed, simplified versions of which are presented in tables 1 and 2.

They point out that assessments must be 'educationally sound; valid; adequately reliable; cost-effective (in time and money); and useful for job selection and career planning' (Reynolds & Mackay 1997, p.8). Further, they add:

- That the operational definitions of key competencies must not be over-specified to the point where their validity is reduced and their generic nature is constrained
- That contextual variation must be reduced so that assessment will be more reliable
- That the effects of variations between raters must be minimised by using more than one rater for each assessment. (Reynolds & Mackay 1997, p.8)

Table 1: Models of assessment

Assessment model	Description
Inferred	Evidence of key competencies is inferred from performance in technical subjects, i.e. from grades.
Parallel	Key competencies are taught and assessed separately.
Separate tasks	Not only are the assessment tasks separate, they are specific only to the key competency in question.
Integrated	Inference is drawn from across groups of subjects.

Source: Reynolds and Mackay (1997)

Table 2: Models of reporting

Reporting model	Description
Cross-curricular	Overall achievement is reported.
Within subject	Each key competency in each subject is reported separately.
Grouped subject	Reporting of key competencies is grouped in like areas, e.g. those within science and technology.
Portfolio	Written summaries and concrete examples are presented for each key competency.

Source: Reynolds and Mackay (1997)

Central to the challenge of effective, valid generic skills assessment is the determination of whether such skills are inseparable from other skills (that is, technical skills) or whether they stand alone. For practitioners, this decision is further complicated when generic skills are implied rather than being expressed explicitly. Cummings observes that each approach, which he labels as 'adjunct' and 'integrated', poses its own challenges. Although identifying generic skills separately from technical ones might increase the likelihood that they are not overlooked, 'the danger arises that they are not seen as relevant or important by students'. While, on the other hand, the integrated approach requires more work on the part of program developers and teachers who must design opportunities to facilitate generic skills attainment and assessment, Cummings found it to be more popular in all three sectors of education and training (Cummings 1998). Dawes supports the observation that it is more complex to integrate generic and technical skills training, but adds that it is to be preferred 'because it makes generic skills more relevant to the job and hence increases the motivation to learn' (Dawe 2002, p.71).

Francis Green, researching the market value of generic skills for Britain's Skills Task Force, pointed out that:

> Many skills have a 'tacit' character that, notwithstanding policy-makers' recognition of the importance of acquired competencies, are not easily certified. Equally, several skills cannot be fully codified and acquired in formal training. Workers who are deploying such skills in their existing jobs may not be able to signal these abilities adequately to other potential employers.
>
> (Green 1999, p.3)

These three related observations are dense with implications for the recognition, delivery, assessment and certification of generic skills. Perhaps most important is the irony that the tacit nature of such skills works against their being recognised, not only by observers, but also by those who possess them. In the labour market, it is often more important to be able to identify possession of a skill than it is to merely possess it. The difficulties which educators and policy-makers have in certifying the acquisition and possession of generic skills can thus be seen to disenfranchise those who must rely on a 'piece of paper' to establish that they have a claim on certain employment options.

The ability to conceptualise and articulate possession of generic skills may be regarded as the most sophisticated of the generic skills—a meta-generic skill, perhaps. It is this very skill that the best approaches to generic skills assessment seek to inculcate in teachers and learners alike.

Almost ten years ago, the New Zealand Qualifications Authority (NZQA) observed the paradox that:

> In developing essential skills and generic skills it is necessary to embed the skills within specific contexts, but in order to enhance the likelihood of transfer of the skills to new situations they need to be separately identified and reported
>
> (New Zealand Qualifications Authority 1993, p.14)

Importantly, they noted that: 'If the essential skills are not separately reported it is unlikely that they will have widespread recognition' (New Zealand Qualifications Authority 1993, p.14). If a 'common skills language' or a 'standard reporting format' could be achieved, it was felt that such recognition might be more likely.

In considering possible ways in which essential skills could be recognised within New Zealand's National Qualifications Framework (NQF), the New Zealand Qualifications Authority proposed four possible models, simplified here:

Table 3: Four possible models of assessment

Assessment model	Key features
Separation	Essential skills to be assessed and reported on separately, not linked to NQF. Would allow for reporting that met local requirements, but no national consistency.
Adjunct	Essential and generic skills to be developed as discrete units, free of context. Could be delivered independently or as adjuncts to other subject-specific units.
Integrated	Elements would be identified, assigned to a level within the NQF, but not grouped into units. Program developers could select elements they deemed relevant to their context.
Combination	Rather than large units of essential skills, small units of one or two elements would be developed. Several of these would then be required to cover a single essential skill. The context would be provided by the technical units with which the essential skills units would be co-requisites.

Source: Adapted from New Zealand Qualifications Authority (1993)

Cummings reports on the findings of surveys conducted in the university sector that found that employers' preferences for the reporting of generic skills were for criterion-referenced, descriptive reporting, supported by examples of students' work 'which demonstrates each attribute'. Research in the secondary schools and VET sectors, he reports, found that portfolios, assessment by several teachers, self-assessment by students and examples of work were recommended (Cummings 1998). The unexamined premise here is that it is possible for students to produce portfolio (that is, hard copy) evidence of their generic skills attainment.

The explicit addition of 'personal attributes' to employability skills in the Employability Skills Framework proposed as definitive industry requirements by Australian Chamber of Commerce and Industry and the Business Council of Australia poses new challenges to employees, learners, trainers and assessors. The report concludes that:

> The identification of personal attributes as critical to employability by employers raises a set of issues about how to assess such attributes. Employers are using a range of tools including observation, work placements and references. However, it is essential that the education system now take up the challenge of developing assessment methodologies that can provide advice to the individual.
>
> (Australia Chamber of Commerce and Industry & Business Council of Australia 2002, p.58)

Whether the 'individual' referred to is the employee or the employer is not clear, but perhaps we are invited to assume that both would be well served by the provision of clear and unambiguous feedback on the assessment of the employee's personal attributes. While the inclusion, by peak employer bodies, of 'personal attributes' in a typology of employability skills, may, intuitively, be understandable, it greatly compounds the difficulties which stakeholders already have with generic

skills, and could be regarded as problematic by many in the 'education system' given responsibility for their assessment.

Lessons from the British experience

Britain's Qualification and Curriculum Authority specified six key skills which were later re-categorised as 'main' key skills (communication, application of number and information technology) and 'wider' key skills (working with others, problem-solving and improving own learning and performance). A significant amount of material was generated to support the incorporation of key skills into Modern Apprenticeships, National Traineeships and the innovative 'combined professional pathway' which offered students the opportunity to achieve postgraduate university qualifications and National and Scottish Vocational Qualifications (N/SVQs) simultaneously (Lester 1995, p.1).

The Qualifications and Curriculum Authority set the national standards for the key skills, which throughout Britain are formally assessed and recognised. There are five levels of key skills, broadly corresponding to the national qualifications framework. There are four levels within each of the three main key skills, while level 5 is a single unit that requires the integrated application of other key skills into one that comes under the umbrella of 'personal skills development' (Qualifications and Curriculum Authority 2000). Achievement of a key skills qualification is a prerequisite for entry to higher education.

The Qualifications and Curriculum Authority produced detailed three-part guides whose purpose was to inform candidates/students/trainees/employees at each level of each key skill:

- what they needed to know
- what they must do
- the types of activities they might undertake and examples of evidence that they could provide to demonstrate skills acquisition.

They also produced overview publications intended primarily for assessors, helping them to understand the key skills units, identifying principles of effective practice, suggesting ways to promote the effective learning of key skills, and informing assessors about formative assessment and assessment for certification purposes.

The focus for teachers and trainers here is on formative assessment: the facilitation of candidates' self-assessment, the development of their portfolios, and the forms of evidence they ought to be accumulating. Summative assessment is not the teachers' responsibility, but is all conducted externally, with responsibility for certification resting with approved awarding bodies. In this, the British system is significantly different from the Australian one, but there is nonetheless much that can be learned from their system-wide approach.

The requirement to assess these skills individually rather than in an integrated fashion undoubtedly led towards their being taught specifically, as predicted by Unwin (cited in Kearns 2001, p.63).

However, after initially adopting an integrated approach to the teaching and assessment of the three main key skills, in September 2001 Britain decided to begin phasing out its combined key skills qualification in favour of students registering for individual key skills qualifications. Schools and colleges are now being encouraged to develop the so-called wider key skills. Concerns about assessment were a part of this decision—the use of the phrase 'the overall assessment burden of the key skills qualifications', a telling indicator of how challenging assessment of key skills has been (Qualifications and Curriculum Authority 2001).

Conclusions

The clearest messages from the international literature on generic skills relate to their complexity and the attendant difficulties with comprehension, definition and application. The same message is found in the Australian literature on the topic. Despite the apparent vigour and far-sightedness of the Mayer Committee's recommendations, the key competencies which they proposed in 1992 are still surrounded by confusion, regardless of their place within nationally promoted training packages and broader educational policy.

While disagreement as to the constitution of generic skills flourishes on the surface, it is underpinned by a more fundamental divide between those who believe in transferability and those who are not convinced of it. As long as agreement cannot be reached over these aspects of generic skills, it is unlikely to be achieved over modes of assessment, which require even more complex levels of understanding. Like many other 'motherhood' statements, much that is said about the value and nature of generic skills in vocational education and training remains in the realm of rhetoric, nominally appreciated by all, but substantially understood and implemented by very few.

There is much that Australia can learn from the successful strategies adopted elsewhere in recent years, for example in Britain, as long as we are cautious about some aspects of that experience. However, we should also be alert to the lessons that need to be drawn from our own experience. The 'employability skills' which are currently taking centre stage will suffer the same fate as the key competencies if they are not supported in the sort of practical ways that enable policy to be translated into effective practice. Not only business and industry, but also the entire Australian community will benefit if generic skills can be successfully foregrounded in vocational education and training. However, substantial investment in the professional development of Australian VET practitioners is a necessary pre-condition for this achievement.

Understanding generic skills

The stated focus of this research was on assessment and certification of generic skills, primarily as they are represented by the key competencies. In addition, the project explored:

- the place of generic skills in training packages
- the language used by practitioners when talking about generic skills
- the extent to which generic skills were valued by practitioners and industry
- practitioners' perceptions of the way in which generic skills are incorporated into training packages and their suggestions as to how they may be better incorporated.

The place of generic skills in training packages

An important preliminary activity in the study was a desktop audit of a range of training packages in order to determine how generic skills were covered, whether they were included as discrete competencies, and/or whether they were embedded into vocational units of competency. This examination was then narrowed to include only those training packages being delivered by the registered training organisations selected for inclusion in this study. The outcomes of this process are tabulated as appendix 3. It should be noted that the majority of training packages covered in this study were first versions.

This audit indicated that generic skills in their broadest sense have been included as discrete units of competency within the training packages included in the study and that generic skills are also embedded within vocational or technical units of competency. Industry-determined competency standards are made up of units of competency, which in turn are made up of elements of competence, performance criteria, a range of variables, and an evidence guide. Examples of embedded generic skills can be identified at both the element of competence level and the performance criteria level across training packages.

The most significant way in which generic skills are identified in these first versions of training packages is in the information tabulated on the final page of every unit of competency which identifies the Mayer key competencies and the three possible levels at which they should be assessed, an example of which follows at figure 1.

Figure 1: Mayer key competencies with suggested levels (1–3) at which each should be performed and assessed

Key competencies						
Collect, analyse & organise information	Communicate ideas & information	Plan & organise activities	Work with others & in teams	Use mathematical ideas & techniques	Solve problems	Use technology
3	3	2	3	3	2	2

Source: Mayer (1992)

However, in some instances, generic skills appear not to be explicitly expressed, and this may be because they are seen as integral to a good deal of vocational activity. Although key competencies, such as solving problems and using technology, are broadly accepted as being inseparable from the technical elements of competence with which they are integrated in workplace performance, they are not always discretely identified, but are implicit in many units of competency.

With such diversity of approaches to the place of generic skills within training packages, it would not be surprising to find inconsistencies in delivery and assessment across registered training organisations and VET systems. Further, such an environment is likely to foster disparate practitioner understandings and perspectives on what the literature clearly shows to be an extremely contested topic.

The language of generic skills

Just as the terminology used to describe generic skills differs from country to country, so this study shows that it differs within Australia from practitioner to practitioner. However, although they may differ from one context to another, the generic skills identified by informants to this study are typically those required by learners to function effectively in the workplace.

Most informants were familiar with the Mayer key competencies, but they indicated that they were less familiar with the term 'generic skills'. They did, however, associate a very broad range of skills with the term 'generic skills'. Their responses (detailed at appendix 4) can be loosely grouped as follows:

- personal values, attitudes and attributes; for example, ethics and integrity, confidence and self-esteem, personal qualities, respecting the ideas and opinions of others, respecting diversity, initiative and creativity, reliability and responsibility
- self-management; for example, punctuality, hygiene, personal presentation
- work management; for example, organisation of own work, meeting deadlines, understanding systems, stress management
- industry awareness; for example, awareness of the industrial landscape, business knowledge, occupational health and safety
- customer service; for example, telephone skills
- responsibility for own learning.

While a few informants were familiar with the terms 'key skills' and 'core skills' and the international generic skills agenda, many use different terms when talking about generic skills. Generally, all informants understood generic skills to be any skills that learners need for lifelong learning and living.

Centrelink has developed a training system that ensures that staff acquire generic skills during their on-job training. Centrelink assessors have a good knowledge of generic skills, especially the Mayer key competencies. They consider the key competencies to be a good starting point on which to base the incorporation of generic skills into training, but they also base their training on the 'dimensions of competency', many of which are based on generic skills and also on the enterprise-defined Centrelink 'shared behaviours'.

A Campaspe College of Adult Education informant commented:

> Generic skills are transportable skills, and not only that, they are essential for success in life. If we are talking about lifelong learning, if we are talking about people developing skills to be successful in the workforce they need to have developed these generic skills. If people have worked in the retail industry and have strived to be effective in delivering good customer service, they can do just about any job. So, I think the retail area is one of the strongest areas for developing generic skills that are transportable.

Informants from Spencer Institute of TAFE indicated that the term 'generic skills' was interpreted in at least three different ways. First, they were seen as the core units which appear across the streams within the Community Services Training Package. These were identified by the provider as common competencies.[3] Second, generic skills were seen as similar to, or the same as the key competencies, which are required across all workplaces. Third, there were those skills, deemed essential for community service workers, which were beyond those included in the training package. These were described as 'professional skills'.

Some Australian Capital Territory senior secondary college practitioners are more familiar with the term 'key competencies' than they are with the term 'generic skills'. They consider that generic skills overlap with the Mayer key competencies, but that generic skills are a broader set of skills relating to the context of the work environment. Team skills, attitudes and the development of a work ethic were identified as being the most important generic skills for work readiness. Others indicated that they were still unclear about the role of the Mayer key competencies in training.

An assessment manager from Burnley College made the point that there can be confusion about the definitions of the terms 'generic skills' and 'core competencies'.

> There is probably a bit of confusion here in terms of when we talk about generic skills in the sense of the generic competencies or competencies that we believe should be against particular levels of training as opposed to some of the concepts of generic skills that take people up to supervisors level, say at level IV.

Burnley College informants considered that the language that is used to describe generic skills in the Horticulture Training Package has been applied inconsistently, is too complex and results in inconsistent assessment outcomes.

While clearly very familiar with all key competencies, the Torrens Valley TAFE teachers also talked about values and attitudes and self-management as being significant inclusions in any listing of generic skills. They considered that the terms 'key competencies' and 'generic skills' were virtually interchangeable.

How generic skills are valued

All practitioner informants were asked: 'In your opinion, are generic skills important in your industry?' In addition, they were asked to indicate their perception of the importance of generic skills in relation to that of technical or vocational skills, that is, were they of equal, greater or lesser importance?

Their responses indicate that they all perceived that their industries generally valued generic skills very highly. Generic skills are seen as underpinning effective performance in the workplace and are seen as a foundation for work readiness. However, there was a degree of consensus among practitioner informants that generic skills are often not adequately addressed in the training process and may be undervalued by individual employers.

Some of these teachers suggested that in their view, different generic skills are required for managers than are required for other work levels, and as a consequence, the degree of importance associated with generic skills increases with increasing Australian Qualifications Framework (AQF) levels.

The value of generic skills as they relate to employability is due largely to their transferable nature. Because of the perceived difficulty in building competence in generic skills if they are not already

3 These included such units as 'Work with others', 'Communicate with people accessing services of the organisation', 'Participate in the work environment', 'Undertake administrative work', and 'Follow the organisation's Occupational Health and Safety policies'.

possessed, the majority of practitioners in this study expressed the view that industry generally prefers newly employed workers to have generic skills which they bring with them from previous training or work experience. The value of generic skills to business and industry is underscored by their use in recruitment and staff promotion processes, rather than sole reliance on the qualifications held by candidates.

It was repeatedly mentioned that generic skills are valued in many areas (business services, community services, call centres, office administration, workplace trainer and assessor, retail, hospitality, and tourism) because they are critical elements in accomplishing typical vocational tasks.

The three electronics and information technology teachers from Torrens Valley TAFE were quite strong in their views about the importance of generic skills in their particular industry. One commented that it is an industry that is fast-moving and constantly changing technologically. As a consequence, employees have to be prepared to update their technical competencies. Key competencies were seen as crucial to lifelong learning, for they provide people with the tools to adapt to new workplace requirements.

In its initial stages of implementation, the team from electronics and information technology promoted their strategy with employers in order to build a better understanding of key competencies and their value to industry. Now brochures are distributed to employers to raise their awareness and to alert them to the certificate that some students will use to access employment.

One issue raised was that of the terminology used to describe generic skills. From information gathered by the electronics team in a 1996 project, it was clear that the terms used were not well understood by industry. However, it was noted:

> In their own words they held the key competencies in higher regard more often than not, than the technical skills. They continued to tell us that they could provide the technical training for employees, but they could not give them the key competencies as easily.

At Spencer Institute of TAFE generic skills were seen as the basis for all other competencies and equally important for lifelong learning and potential job and career changes. The discrete common units of competency that were generic in nature were seen quite clearly as 'essential' and 'core skills'. In addition, personal management skills and communication skills were seen as important because this program is delivered flexibly. Informants considered that this meant that students required personal time-management skills and communication skills not only to demonstrate competence in the workplace, but also to be able to complete the work requirements of the course.

Centrelink regarded generic skills as being important, seeing them as transferable skills which will be used by learners, not only in their current job, but also in other jobs later in their careers.

This was a consistent view across all informants, one in particular from Burnley College noting that the transferable nature of generic skills gives them additional value:

> Workplaces are changing. People are required to be mobile and to move from one part of industry to another. The portability experienced by people in their working lives should be reflected in training.

Both Burnley College and the Australian Capital Territory senior secondary college staff suggested that a good work ethic was the most crucial of the generic skills.

A training manager from Campuspe College of Adult Education thought that generic skills were sometimes undervalued in industry:

> I think they are undervalued in two ways: one is that educators undervalue them, because it is easy not to focus on generic skills and there are also time constraints and pressure from employers, particularly on workplace assessors. Secondly, employers sometimes see generic skills as a waste of time as they are focussed on tasks and not the complete education process.

> Employees lacking generic skills may be required either to 'shape up or ship out'. Employers are not always prepared to assist learners to develop competency in the area of generic skills.

One Torrens Valley TAFE informant commented:

> The true measure of all of this rests with the individuals involved. How the users value them will determine their level of importance. If an employer values them, then they will be seen as very important. If an employer does not care, then little notice will be taken of them. This will only change if they are promoted more.

It was further suggested that there is a long way to go in building the understanding of employers and industry with regard to key competencies and this is not helped by the lack of strong national policy and support for the delivery and assessment of generic skills.

The fact that the value of key competencies has not been adequately promoted to students was also noted:

> Key competencies may underpin lifelong learning, but unfortunately that is not the impression that students have. They instinctively focus on the certificate that they are going to get at the end of the course. There is no explicit emphasis or carrot to say that key competencies are what they need too.

The relationship between generic and technical skills

Although two informants considered that they would not like to see more generic competencies in the packaging arrangements at the expense of the vocational competencies, most informants thought that generic skills were as important, if not more important, than technical skills.

Several informants also indicated that generic skills couldn't be easily separated from technical skills. There was a degree of consensus that it is relatively easy to teach technical skills to people who already possess generic skills, but that it is not so easy to build generic skills if people lack them.

For instance, an assessment manager at Centrelink mentioned that generic skills are regarded as of great importance in the business services area because the competencies involved and the skills required to function in the job are by their nature generic skills.

> If someone can use our computer systems and can interpret the legislation, but they can't also do things like work in a team, they can't deal satisfactorily with customers, they don't have flexibility, they can't manage their workload, solve problems or plan for contingencies then they're not going to be successful in the Centrelink work environment and probably wouldn't last very long in this organisation.

A Centrelink manager also suggested that for certificate III and certificate IV people, generic skills were probably of about equal importance as the technical skills, but for team leaders who were focussed more on frontline management, the development of competency in the area of generic skills would be more important than the attainment of actual technical skills. A Centrelink consultant also suggested that the degree of importance associated with generic skills increased with the Australian Qualifications Framework level of the training being provided:

> Once you get into AQF level IV generic skills become absolutely critical as they make the difference. People with a good grounding in the generic skills are going to be the good supervisors, the good team leaders and the potential managers.

One electronics and information technology teacher at Torrens Valley TAFE suggested that technical skills are crucial, and that without them, employment would be problematic.

Better incorporating generic skills in training packages

The inconsistent way in which generic skills are dealt with in training package documentation has created the potential for inconsistent delivery and assessment outcomes across assessors and across training providers. There was fairly universal agreement amongst informants to this study that

generic skills are not clearly described. At the same time, most felt that the coverage of generic skills was either 'not enough', or 'about right' in their training package. None of them felt that too much emphasis is given to generic skills.

Despite the inclusion of the key competencies in every training package, informants suggested that in some, generic skills are only implied; and that in others, there are essential skills that they consider to be generic in nature that have not been included. One informant also commented that the suggestion that because key competencies are embedded in training packages means that they can be inferred as being achieved by mere completion of training, is sending the wrong message:

> Generic skills need to be much more comprehensively addressed in the training packages. They need also to be more explicitly learned and assessed. Only then will the level of learner awareness and understanding be raised and the key competencies openly accepted as valued assets by students, employers and industry.

Whether generic skills are clearly expressed or not in training packages, informants indicated that they still assessed them because they represent a fundamental part of learners' work readiness. However, although informants want to assess particular generic skills they consider important for their discipline areas, they feel constrained by the lack of clear direction within their training packages. They also recognise that there is a risk involved in conducting assessments that may be open to challenge by learners because the generic skills performance criteria are not explicitly identified.

In response to these perceived shortcomings in the way that generic skills are incorporated into training packages, some informants have developed strategies to ensure that their training and assessment incorporates generic skills.

Centrelink informants consider that the coverage of generic skills within training packages is insufficient for their needs. Consequently, they supplement the generic skills identified in training packages with generic skills documented within the 'dimensions of competency', and also generic skills from within the enterprise-defined Centrelink 'shared behaviours'.

Despite the improved approach to key competencies in the new Business Services Training Package, Centrelink trainers still consider that there is a need to supplement its coverage of the generic skills. They have increased the profile of generic skills within their training environment by including relevant generic skills or units of competency from the Frontline Management Initiative and Community Services Training Packages.

Burnley College has structured its courses to include discrete generic competencies. The Horticulture Training Package already contains six compulsory core modules, but Burnley College has identified an additional eight compulsory core competencies which are effectively generic skills and against which all students are assessed.

Spencer Institute of TAFE informants believed that, while the generic units of competency within the Community Services Training Package are well developed, the vocational units of competency provide minimal information regarding the key competencies, and the assessment guidelines do not mention key competencies or provide guidance for developing assessments. They do provide information on holistic assessment, but do not mention integrating generic skills into assessment. One trainer considered that generic skills are more embedded in the units of competency than in the previous curriculum and therefore require additional effort to be incorporated into the training and assessment of vocational units of competency.

There was a good deal of consensus amongst the Torrens Valley TAFE electronics and information technology informants on how generic skills are incorporated in the Electrotechnology Training Package. All agreed that while the key competencies are embedded, they are not given the recognition that they deserve. The three teachers interviewed rated the emphasis on key competencies as far too little. Comments attached to the issue of coverage were 'they are almost a footnote' and 'they are somewhat removed or hidden'.

Although indicating that there is a seeming disregard for generic skills, each of these teachers noted that the suggested assessment strategy outlined in this, an early version of the training package, meant the approach is far too broadly applied. This view is reflected in the following comment:

> Every Key Competency is mapped against every unit of competency suggesting every competency must incorporate the demonstration of all key competencies to some level. I do not think it should be driven that way. That makes for an unfeasible number of key competencies that need to be addressed and assessed. That in itself makes it easier for people, both teachers and learners, to be switched off by it and for them to say it is all too hard, too much, too complex. It reinforces the possibility that they are going to be ignored.

There was general recognition, however, that the learning and assessment activities required in the delivery of their mapped program of modules or the units of competency all provide extensive opportunities for the key competencies to be recognised.

Overall, informants made both general and specific suggestions for improvements, including making generic skills more explicit in training packages. The importance of incorporating generic skills into 'performance criteria' and 'elements of competency' within training packages was also stressed. A number of practitioners suggested some specific competencies that they felt needed to be added to particular training packages and also some existing competencies that required further emphasis, as outlined in table 4.

Table 4: Specific additions required or existing areas that require strengthening

Training package	Aspects for inclusion or strengthening
Tourism	Creativity, interpersonal skills, responsibility, reliability, punctuality, time management skills and development of a work ethic
Call Centre	Leadership
Retail	Employer expectations, personal effectiveness and personal development, including areas such as motivation
Office Administration	Attitudes to people and the development of a work ethic
Hospitality Industry	Attitudes and expectations of enterprises
Horticulture	Operate a computer to produce simple documents, access the internet, numeracy, functional literacy, development of a work ethic

In summary

The practitioner informants who contributed their perceptions to this study confirmed what had been noted in the desktop investigation of training packages—that generic skills are inconsistently represented in training packages. This understandably led to inconsistencies in their delivery and assessment.

Familiarity with Mayer's key competencies was not matched by understanding of generic skills, although they were broadly regarded as valuable skills for enhancing employability. Some organisations even interpreted and developed their own sets of generic skills.

Many informants believed that the value of generic skills ought to be promoted more to industry, employers and to learners themselves. They regarded generic skills as equally important as technical skills, but as much more difficult to teach and assess.

Some informants have developed their own strategies to ensure the place of generic skills in their training program, and many suggested that the addition of further relevant resources to the training packages would be welcome.

Assessment of generic skills

Practitioners in this study were asked to outline what strategies they employ to assess generic skills in their training programs. At the same time, they were asked to describe:

- the extent to which they acknowledge key competencies in assessment
- how their assessment approaches to key competencies and generic skills were formulated
- what assessment information is provided to trainers/assessors and learners
- any differences between the assessment of generic skills and vocational competencies
- the implications of learner failure to achieve competence in key competencies or generic skills
- the critical factors in generic skills assessment.

In this section of the report an overview of the principles of generic skills assessment as they are understood by the participants is provided. In the following section, 'Approaches to generic skills assessment', each organisation's approach to generic skills assessment is discussed in greater detail.

Key competencies in assessment

Many informants were not confident that they are assessing the key competencies in a way that accurately reflects the specifications in their training package. More importantly, some are unaware of the way that key competencies are expressed in training packages because they use modularised delivery systems with curriculum mapped from the training package rather than the training package documentation itself. Thus there is a reliance on course developers incorporating this information into the modules.

For instance, at Centrelink the approach is to integrate the key competencies into a broad assessment strategy, rather than to assess them separately. Key competencies are integrated at the stage of learning materials development to ensure that they are assessed. Centrelink looks at the key competency plus the requirements of the workplace and then the competency standard is contextualised through the development of a skills and knowledge checklist which relates to the target audience.

At Spencer Institute of TAFE trainers indicated that the information provided in the training package was limited. They felt that this made it difficult to be sure that they had adequately addressed the integration of the key competencies into the training and assessment of vocational and generic units of competency.

Teachers in the electronics and information technology program at Torrens Valley TAFE were both familiar and confident with key competencies and have implemented a comprehensive system for their assessment. They have developed agreed benchmarks of performance for each of the three Mayer key competency levels (see appendix 5).

Assessors from the other registered training organisations, however, were less comfortable with the idea of assessing key competencies at the three levels within their programs. For example, Burnley College staff stated that while they understood the three levels as *perform, design* and *administer,*

the training package is perceived to be too hard to read and interpret with regard to how the levels should be assessed.

Similar comments were made by Australian Capital Territory secondary college teachers, who indicated that, while some staff are aware of the three levels, many are not aware of them and not all VET-in-schools course documentation includes information about the three levels of the key competencies.

A Centrelink trainer indicated that while they are aware of the three levels, they don't consider them directly in the assessment process.

> Assessments are focussed on the requirements of the evidence guide in the competency standard and tasks have been selected accordingly. Presumably the evidence guide has already taken the three levels into account.

Campaspe College of Adult Education staff mentioned that their delivery is not always focussed on the particular level of key competencies but rather on what is required to complete a task in a competent manner. It was suggested that the levels identified in the training package might not necessarily be appropriate to the competency.

> For instance, in the competency 'Train small groups' the Mayer Key Competency, 'Communicate ideas and information', is listed at level 2, whereas in reality, in order to train people, it is necessary to communicate ideas and information at level 3. So, assessments of generic skills are pitched at a level that is regarded as relevant to the competency regardless of what level is identified within the Training Package.

Similarly, trainers at Spencer Institute of TAFE were less confident in the key competency levels as indicators of the standard required in the workplace and for satisfactory completion of the course, preferring to rely on their understanding of industry and applying this to all their assessments.

Strategies to ensure that the key competencies are assessed at the right level have been developed by several registered training organisations. For example, Centrelink informants noted that:

> Consideration of the AQF levels and the three levels of the Mayer key competencies is built into learning materials and instruments via careful selection of descriptors at the unit development stage. In this way, central program developers ensure that units are pitched at the correct level, freeing assessors to concern themselves with more general aspects of the delivery of training.

Burnley College's main strategy is to ensure that questions and tasks are couched in terms that indicate whether learners can perform at the appropriate level. For instance, 'analyse and solve a problem' is intended to indicate a higher level than 'recognise that a problem exists'.

A similar approach is adopted by the informants at Campaspe College of Adult Education, where the language used in performance criteria guides the level at which assessments are pitched. To increase their confidence that they are assessing at the correct level, internal staff development processes are focussed on benchmarking. Campaspe College of Adult Education informants also suggested that the Mayer key competencies could be expressed more clearly, simplified and couched in plain English terminology, particularly for the sake of standardising assessment outcomes.

> It is difficult when you first read through the documentation to interpret what is required and it is possible to arrive at several different interpretations of what is meant.

For Torrens Valley TAFE practitioners, assessment at the appropriate level is not an issue as they have confidence that their system ensures that this occurs.

Formulation of assessment approaches

In formulating their approaches to assessment, informants have adopted a range of strategies, some of which involve extensive collaboration. In the case of Centrelink, project teams were assembled

for the development of specific training programs into which generic skills are integrated. Centrelink assessment team members include workplace assessors, people with higher education qualifications, and people with strong industry backgrounds. These teams then work to develop agreed strategies.

The approach adopted by the Torrens Valley TAFE teachers is an outcome of a long-standing project involving focus groups, research, professional development sessions, interactions with industry and careful deliberation by an institute-wide working party.

In the other organisations, collaboration with other teachers, in part, focusses on ensuring that uniform expectations are set for the assessment of generic skills. For instance, while individual colleges in the Australian Capital Territory set their own policy about the assessment of generic skills, system-wide moderation sessions help to standardise their approaches.

Burnley College is involved with the Victorian horticulture teachers' network, currently working to identify the underpinning skills and knowledge required for competencies. While the collaborative efforts of the network have resulted in some agreed strategies, there is still not total agreement about these issues. During the development of the Horticulture Training Package, there was a great deal of discussion about assessment, including the assessment of generic skills. That discussion is occurring less frequently now.

Spencer Institute of TAFE trainers have collaborated to develop program materials and assessment tasks for flexible delivery. All materials have gone through an extensive development and review process. Given the extent of on-the-job assessments of units of competency and of what Spencer Institute of TAFE terms 'professional skills', extensive collaboration was required with on-site supervisors, especially in the interpretation of the units of competency as well as the standard to be achieved by learners.

Information for trainers/assessors on assessment

Many of those interviewed did not believe that they have adequate access to guidelines for the assessment of generic skills. This is particularly the case for informants from Campaspe College of Adult Education, Burnley College and the Australian Capital Territory senior secondary colleges. Further, many suggested that they do not have the resources to develop such guidelines. As a consequence, they rely on the information within training packages to provide them with guidance on how generic skills should be assessed. Generally, the guidelines for assessment of generic skills within the first versions of training packages are seen to be inadequate.

Although guidelines for the development of courses in Australian Capital Territory senior secondary colleges do encourage course developers to include the key competencies in their courses, no specific guidelines are given about how this should be achieved. The emphasis within Australian Capital Territory senior secondary colleges has been on getting the assessment of industry competencies right, rather than on the key competencies.

In the absence of formal guidelines about how to assess generic skills, informants in a number of the registered training organisations base their judgements on their general understanding of assessment processes, trusting that their training in assessment enables them to generate a valid approach. However, one trainer commented that when assessing embedded competencies, it was harder to develop assessment tasks to ensure coverage, and that more guidance was needed.

Another teacher commented on a need for quality advice within training packages and suggested:

> If they want to make the assessment of these generic skills the same or equal across Australia, then they need to start telling us exactly how we should be assessing our trainees and perhaps a description of what that trainee needs to demonstrate to prove that they are competent in those generic skills.

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Most informants indicated that, regardless of whether guidelines for the assessment of generic skills have been produced, they engage in informal discussions with colleagues and industry about how generic skills should be assessed.

Informants from two of the organisations in the study, however, have committed considerable time and resources to the development of comprehensive assessment strategies for the assessment of generic skills. Electronics and information technology teachers at Torrens Valley TAFE have all been actively involved in the development of the supporting documentation which is in place for use by assessors in their department. At Centrelink a number of staff participated in a national working party to develop guidelines for assessment of competency, including the assessment of generic skills. These guidelines took information from the training package and expanded, contextualised and restated it for Centrelink assessors.

Information for learners on the assessment

Generally, the organisations included in the study have yet to establish well-developed systems for informing learners about how generic skills will be taught and assessed. Where generic skills are discrete units of competency, advice is provided. Where generic skills are embedded within technical units of competency, the information provided tends not to specifically address the generic elements within units of competency. Informants to this study indicated that it is uncommon for students to be given information that relates solely to the assessment of generic skills.

As generic skills are not formally assessed in the Australian Capital Territory senior secondary colleges, no formal advice is given about their assessment. At Burnley College information about how generic skills will be assessed is encompassed in general assessment advice.

No written information is provided to Campaspe College of Adult Education learners about generic skills assessment, but areas such as communication skills and attitudes and values are identified as critical generic aspects of any task and learners are advised verbally that these skills will be included as part of the assessment.

While Centrelink has developed a significant learning and assessment framework which includes key competencies and other generic skills, these are not directly mentioned in assessment advice because they are completely embedded. The assessment requirements for each of their modules are designed to ensure that the relevant generic skills will be assessed without the need to draw attention to them directly in the written information. However, one Centrelink informant commented:

> While the term 'generic skills' may not be used directly in discussion with learners, it is common to discuss competencies such as self-management which is clearly a generic skill.

Thus, while the information provided to Centrelink learners in handouts does not contain the words 'generic skills', the language used indicates that skills of a generic nature will be addressed.

At Spencer Institute of TAFE learners are provided with a range of information related to assessment in general. For discrete generic competencies, advice is the same as that provided for vocational units. In relation to assessment of 'professional skills', students are provided with a rationale for assessment that stresses the importance of these skills and attitudes to their industry and themselves.

A more detailed description of how learners in the electronics and information technology programs at Torrens Valley TAFE are provided with advice on key competencies and their assessment is provided in box 1.

Box 1: Advice to learners in the electronics and information technology programs at Torrens Valley TAFE

Getting the word out about key competencies

In 2000, a comprehensive plan was initiated to raise the awareness and understanding about the Key Competencies Assessment Strategy. Resources to support the uptake of the approach include a number of videos, a Powerpoint presentation and extensive promotional materials and specific resources within learning packages. These are utilised in the program orientation for learners so that they can be inducted into the process from the start of their study. Students are required to view a Powerpoint presentation on the topic as part of their assessment. Teaching staff consider that 'that at least demonstrates that they are aware of the process, know who they can ask about, and where to find, additional information'.

The Powerpoint presentation introduces key competencies, emphasises the importance of having them recognised and gives an overview of the assessment process. Also built into the orientation presentation are two videos. The first involves the institute's senior employment services consultant providing employer views of the value of key competencies that were gathered from surveys of employers of newly graduated students from electronics and information technology programs. The second shows an electronics-based practical activity in which students demonstrate solving problems at the three levels of performance outlined by Mayer. That is, the technical tasks being performed by the three students are similar in nature, but the problem-solving approaches vary in their degree of complexity from level 1 to level 3.

Printed material includes:

- *WHAT and WHY an overview of key competencies and their importance*
- *WHAT TO DO: a step-by-step approach to the whole Key Competencies Assessment Strategy*
- *Sample statement of attainment: a sample of the formal recognition certificate*
- *Student guidelines: a guide to the principles of assessment*
- *Staff guidelines: a slightly more detailed guide to the principles of assessment for staff*
- *Definitions and statements of performance levels: three different versions for three different contexts of use*
- *Assessment sheets for each key competency: offering direct guidance for the assessment process for students and assessors (module facilitators).*

Additional information is also available electronically via the institute's 'student managed attendance roll tracker and resource selector' (SMART), while poster information, brochures and assessment application forms are permanently on display in one corner of the flexible learning study area. The wallpaper and screen savers on computer screens within this area are also utilised to remind learners about key competencies.

In individual module learning guides, specific advice is given about the key competencies and the particular levels that can be assessed while a student is undertaking that module. For example, in the guide for Occupational health safety and welfare, generic fundamentals 'A' the following is noted:

This module provides you with opportunities to be formally assessed in the following key competencies:

Collecting, analysing and organising information	*at levels 1 and 2*
Communicating ideas and information	*at levels 1, 2 and 3*
Working with others and in teams	*at level 1*

See the module facilitator to discuss the key competencies in which you wish to be assessed, and the level to be assessed.

Following on from this statement are the descriptions of the performance levels for each of the identified key competencies.

Differences in approach to assessing generic skills compared to other competencies

Opinion is divided on whether the assessment of generic skills differs from the assessment of other skills. Some informants indicated that generic skills have different assessment requirements than other skills, but some informants thought that there is no difference.

Informants from Burnley College, Campaspe College of Adult Education and the Australian Capital Territory secondary colleges all thought that the assessment of generic skills differed from the assessment of other skills. Some considered that this difference related to generic skills being less tangible or more difficult to quantify. Thus, assessment is inclined to be a more subjective process

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than it is for other skills. However, some Australian Capital Territory secondary college informants also observed that the assessment of generic skills could be so intrinsically linked to the assessment of other vocational skills that the assessment approach is really no different.

Similarly, Centrelink informants indicated that there is no clear demarcation between the vocational skills and the generic skills required to complete a task. Generic skills by their very nature are fundamental to so many Centrelink work tasks that there can be no difference in the way that they are assessed. This notion was confirmed by Spencer Institute of TAFE trainers, who suggested that discrete generic or common competencies were assessed in a similar way to other vocational units of competency.

In responding to the same question, two of the Torrens Valley TAFE teachers commented that assessment of key competencies was no different from that undertaken for other skills. A third teacher suggested that technical skills and knowledge are generally very definite, easily defined and observable, while the individual abilities, concepts and interpretations associated with key competencies are not so easily observable. Furthermore, the information provided to Torrens Valley TAFE learners and assessors indicates that there is little difference in the technical approaches to assessment of either generic or vocational competencies.

The impact of failure to achieve competence in generic skills on learners' progress

As previously discussed, approaches to the assessment of generic skills are largely influenced by the manner in which these skills are presented in training packages. Where the generic skills are discrete units of competency or performance criteria within units of competency, the common strategy for those who are not yet competent is to require them to engage in further learning and to submit for reassessment.

Problems arise, however, when generic skills are not clearly outlined in training packages. In instances where key competencies or generic skills are embedded, the assessment focus appears to centre on the successful attainment of the vocational competency and the generic component seems almost to be ignored. Where this is happening, therefore, the concept of failure to achieve generic skills is not really an issue.

More importantly, some assessors feel constrained by the limits of what is set out in the performance criteria. As expressed by one Campaspe College of Adult Education assessor: 'I cannot assess outside the performance criteria because the assessment would not be valid'.

In Centrelink, competency must also be demonstrated on a number of occasions over a period of time, rather than only once. A range of people, including supervisors as well as assessors, must also observe successful performance. Because generic skills are regarded as being critical to the successful implementation of the business model that currently drives Centrelink, learners who fail to demonstrate competency in such skills are given opportunities to develop them.

> Some learners however, may find it difficult to develop generic skills, such as the ability to work in a team, and if this difficulty persists, even after opportunities have been given for development of competency, then learners may choose to leave the workplace as they may not have the personal ability to work in a team.

Both Campaspe College of Adult Education and the Australian Capital Territory secondary college informants emphasised that where learners meet the learning outcomes and the performance criteria set out in their course, there is no provision to hold them back. At the same time, they noted that where learners do experience problems in developing competence in generic skills, they are provided with personal advice about the situation. Learners are also given extra time and opportunities to develop competence.

Australian Capital Territory secondary college assessors indicated that in some cases students who do not demonstrate general work readiness competencies are deemed to be not yet competent. At the same time, they indicated that students who are working part time in service industries would automatically acquire generic employment skills. This assumption is reflected in the following comment:

> If they do not develop competency in the area of these generic employment skills they would not retain employment, so most often it is valid to assume that students who have a history of successful part-time employment have already developed competency in the area of generic skills.

These colleges can make use of their dual assessment system to indicate that students have not performed adequately in the area of generic skills. While students may receive a competent result against a unit of competency, they can be allocated a low grade to indicate that their level of performance in the relevant generic skills was not adequate.

At Spencer Institute of TAFE, an assessor indicated that while learners would still be formally recognised for the units of competency achieved, they would have difficulty finding and/or keeping a job when they entered the workforce if they had not achieved competence against the 'professional skills'.

Burnley College staff indicated that students are generally allowed to progress once they have demonstrated technical competency, even in instances where there are concerns that their level of generic skills attainment is less than satisfactory:

> Students at level IV are meant to be at supervisory level, however it is very hard to see that many people in fact would have all the generic skills required to perform as a supervisor at that level.

However, in contexts in which the application of generic skills had an impact on safety, Burnley College assessors were rightly much more cautious about allowing progression:

> Most students are progressed through the course, so long as there is not a safety issue. For instance, learners who operate machinery or lop trees carelessly would not be passed until they demonstrated more care in their approach.
>
> Safety and efficiency are key factors that would trigger holding back learners until they have developed competency in the area of generic skills.

In marked contrast to all of these approaches, the concept of failure is not something that is contemplated in the Torrens Valley TAFE approach to the assessment of generic skills. Here, students determine not only whether they wish to be assessed against generic skills, but also the level and the timing of such assessment, together with the evidence that they wish to provide to the assessor. If students submit insufficient evidence, they are given guidance on what they need to do to meet the stated criteria at their chosen level of performance. Any unsuccessful attempts are not recorded as failures and student progress is not impeded by an inability to demonstrate the achievement of particular generic skills.

Critical factors in generic skills assessment

All informants were asked to identify what they considered to be the critical factors in the effective assessment of generic skills. Regardless of the organisation, many of the responses related to aspects fundamental or critical to any assessment and not specific to the assessment of generic skills. Examples of the critical aspects identified were the need to provide a range of opportunities for learners to demonstrate competency, the clear explication of evidence requirements and the processes of assessment, together with clear feedback on the quality of learner performance. In addition, suggestions were also made about the need to assess holistically and to trial assessment tools and validate the evidence provided by learners.

One Australian Capital Territory senior secondary college informant highlighted moderation across colleges as a critical factor in effective assessment of generic skills.

> What I see as a generic skill and what level I think I am assessing may be different to what my colleagues are doing in other places. The core of the problem is the need to clarify and specify which generic skills are being assessed and how they should be assessed and to follow this up with moderation of common assessment tasks.

Concerns about what can be defined as generic skills, therefore, is an issue that requires clarification before assessment can be effectively conducted. Spencer Institute of TAFE informants reiterated this and noted that the critical factor for them was the need for clear and explicit units of competency. Only then could trainers develop valid assessment tasks and accurately interpret the evidence that learners provided against agreed performance criteria.

The electronics and information technology teachers at Torrens Valley TAFE suggested that a delivery and assessment approach that places the student at the centre of the learning was crucial for successful assessment of key competencies. They also stressed the need for quality information for both learners and teachers together with a facilitation and mentoring strategy that actively encourages learners to determine their own evidence requirements. One informant commented:

> Students must familiarise themselves with the process of reading the criteria, understanding them, identifying appropriate evidence, applying themselves to the tasks, double-checking the evidence against the criteria so that they can present a solid case to the facilitator, thereby making the assessment very simple.

The nature of the learning environment is seen as a critical element in the implementation of electronics and information technology strategy for formally recognising the achievement of key competencies. As Rob Denton pointed out: 'Our focus on assessment and reporting is based upon our very confident 'assumption' that our flexible learning program is rich in opportunities to develop Key Competencies'.[4]

The students are very much in charge of their own learning, and the teachers believe that developing and demonstrating key competencies is inherently part of that process. In a flexible learning situation where students make decisions about what modules they want to do, about what resources they want to use and the times that they wish to engage in learning, the knowledge and skills associated with the key competencies are seen as vitally important to their success.

Learners must thoroughly understand not only the assessment processes but also what performance of generic skills will look like. This requires ongoing support and mentoring both in the workplace and by the assessor. Having established the skills and understanding, learners are then in a position to assess their own attainment of generic skills. This process of self-assessment was seen to be vital by many of the informants. They emphasised that learners need to be taught the skills to perform this quite difficult task. Both Campaspe College of Adult Education and Centrelink informants emphasised the importance of learners being able to explain the importance of generic skills themselves. Self-evaluation helps learners to identify their weaknesses and to formulate strategies for improvement.

> Self-evaluation is particularly useful, as even if learners have not performed well in the area of generic skills during an assessment, if they recognise the fact that they have not performed well and can identify how their performance could be improved in the future, they have progressed towards developing competency in the area of generic skills.

Interestingly, an alternative strategy was posed by some informants who suggested that the teaching and assessment of generic skills should be embedded into the general training in a way that is not obvious to the learner, but ensures that generic skills are developed and assessed.

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4 Interview with Rob Denton, <http://www.tafe.sa.edu.au/vet_div/tesi/key_comp/htm/activities/rob.html>.

Most informants acknowledged that it was essential to have trainers and assessors with the requisite skills to facilitate and assess students' acquisition of generic skills. The majority of informants stated that generic skills are not clearly defined in training packages, and this resulted in uncertainty about how they are manifested in terms of behaviour. As a consequence, assessors stressed that they need more effective strategies to be developed to assess elements that are in the personal domain, such as self-esteem, self-confidence, attitudes and values.

In the case of Torrens Valley TAFE, considerable emphasis is placed on providing teachers with the opportunity to critically debate the issues prior to developing their assessment strategy. The Key Competencies Assessment Strategy evolved from focus groups across the whole institute, a 1996 electronics project involving consultations with industry, and ongoing discussions and review of the processes and the outcomes. Allowing time and space for these activities means that general agreement is reached about what constitutes competent learner performance at each level of the five key competencies being covered and what is required for valid assessment and valid judgements.

> An absolutely essential criteria for successful implementation has been that it must be 'workable'. Key Competencies have been on the national training agenda for a number of years now, including many funded initiatives and projects to explore this issue. Despite such high profile recognition and generous commitment to the cause, very little has been achieved in terms of practical implementation—especially explicit assessment of key competencies. There has been widespread deliberation over the implementation of key competencies assessment and great concern over the seemingly unworkable, unwieldy, unacceptable overheads and increased workloads associated with its implementation. This is clearly evidenced by the very limited examples of implementation across the nation. Explicit assessment has been largely ignored and efforts to implement have largely resorted to alternative approaches such as 'mapping' key competencies against curriculum or training package competencies. In reality this increases the likelihood of key competencies becoming lost and forgotten, when what we really want is to make them more explicit and increase awareness of these skills. Empowering students to take control of their key competencies assessment must be one of the best ways to make them more explicit—and this is precisely what we are encouraging. (Denton 2000)

In summary

Many informants expressed uncertainty about whether their assessment of key competencies was appropriate in the context of the particular training package/s with which they were working. Those who are using curriculum mapped from a training package rather than training package documentation itself, may even be unaware of how key competencies have been incorporated in that training package.

It was not surprising to find, therefore, that the extent of awareness of Mayer's three levels of key competency was even more limited. Some had determined for themselves which levels were appropriate for which key competencies in their industrial context.

All informants stressed the importance of collaboration as a strategy for formulating valid assessment approaches. This strategy was also important to those who felt that they had inadequate information about how to assess generic skills. Although informants in some areas had put considerable effort into the development of resources to support generic skills assessment, several others expressed the wish to see better advice on this topic explicitly addressed within training packages. Learners tended to be the losers in this area, very few being provided with specific guidelines on what to expect of generic skills assessment.

Where assessment of generic skills was being conducted most successfully, it was learner-centred, with learners taking responsibility for their own self-evaluation, and in a climate of teacher/assessor support, with practitioners having opportunities to critically reflect on what is required and then to develop appropriate assessment tools.

Approaches to generic skills assessment

The manner in which practitioners approach the assessment of generic skills appears to be largely influenced by the extent to which they are explicitly addressed in the training package being delivered, the value they place upon them in their teaching and assessment, and the level of understanding that they have enabling them to assess them in a valid and effective manner. The diversity of approaches to the assessment of generic skills adopted by the practitioners within the six organisations included in this study is described in the following pages.

Electronics and information technology, Torrens Valley TAFE approach

The comprehensive strategy for identifying, assessing and certifying Mayer key competencies developed by this team of practitioners has been underpinned by extensive research and consultation with stakeholders. Implemented as an unfunded initiative in June 2000, the Key Competencies Assessment Strategy has involved awareness-raising and information distribution, active promotion and marketing to teachers, students, employers and industry, facilitation and mentoring through the learning and assessment process, the development of tools, guidelines and recording systems together with ongoing evaluation and refinement.

In the documentation supporting the strategy, mention is made that the approach 'seeks to recognise the enterprise skills or life skills or employability skills or "Key Competencies" developed and demonstrated by students'.

Emphasis for assessment is placed on only five of the key competencies. These are: solving problems; collecting, analysing and organising information; communicating ideas and information; working with others and in teams; and planning and organising activities. It was considered at the time of implementation that these competencies were enough for both students and teachers to cope with in the first instance, given the newness of the approach. Further, using mathematical ideas and techniques and using technology are key competencies that are considered to be already well covered in the course.

Importantly, the programs offered by electronics and information technology are delivered in a flexible learning environment, and, as a consequence, learners have a choice about what they learn, the resources that they use and the modes of delivery they select. In this learner-centred setting they can also choose to have their achievement of the generic competencies recognised through formal assessment and certification. The methods of assessment and the evidence requirements for individual learners are determined after a process of mentoring and negotiation with teaching staff.

The program at Torrens Valley TAFE follows a modular curriculum mapped to the units of competency in the Electrotechnology Industry Training Package (UTE99). Training is largely off the job with some work placements.

Development of the assessment strategy

The Key Competencies Assessment Strategy implemented by the electronics and information technology is an outcome of a ten-year project. Prior to the advent of the key competencies, teachers within this registered training organisation were working with the concept of 'enterprise skills'. The focus was modified to fall into line with the new generic competencies developed by the Mayer Committee, and work continued on developing a process for recognising them.

An institute-wide working group and focus groups were formed in order to clarify definitions and to develop common understandings about performance criteria and assessment processes. Much discussion centred on identifying which key competencies could be assessed in which modules. Discussions also focussed on defining what competence would look like at the various performance levels and specific criteria and guidelines for teachers were developed to ensure a consistent approach. Validation of assessment decision-making has been conducted and feedback from industry has also been sought throughout.

As the majority of key competencies are embedded in the technical skills and knowledge in the modules delivered by the electronics and information technology team, assessment of these competencies is conducted in parallel with that of the technical modules. The only additional effort on the part of students is to self-assess their performance in their chosen key competency by identifying evidence to address the criteria from the assessment activity undertaken. The assessment activity itself is not extended, but rather, the student is simply required to analyse what they have already performed as part of the required course assessment activity. The key competencies co-ordinator explained their approach, and its rationale:

> One aspect of key competencies assessment that has been long debated is how they should be performed and assessed in relation to technical competencies. Proposed models ranged from total integration of key competencies and technical competencies in development and assessment through to totally discrete development and assessment of the two. The Electronics and Information Technology model endeavours to take the best of each of these extremes by having key competencies 'performed' as an integral part of technical competencies while explicitly 'assessing' them separately. This allows these abilities to be performed in an integrated way just like in the workplace, making the learning 'authentic'. The explicit assessment of the key competencies allows these generic skills to be evaluated in detail across a range of activities and contexts, helping students appreciate the generic and transferable nature and value of these skills.
>
> Explicit assessment is also a crucial strategy for nurturing the development of these skills through student self-assessment of their key competencies. A student's ability to effectively self-assess their performance (1) raises awareness of the processes involved, (2) identifies where they are at with a particular key competency, (3) provides a pathway for improvement, and (4) establishes a framework of understanding to help them apply these skills in different contexts (that is, reinforcing transferability). The facilitator's role is then not so much to assess the student's performance but rather to validate the student's self-assessment.

The discretionary nature of key competency assessment

Information provided to students in the orientation to their course of study emphasises the voluntary nature of the approach that has been adopted by the electronics and information technology section. It states 'the freedom to choose the time, place, manner of study, and which activities you undertake, gives you the opportunity to develop your key competencies'. Thus students are free to participate or not participate in the process of having their generic competencies evaluated.

In commenting on this discretionary aspect of the strategy, the key competencies co-ordinator suggested that while they have not been forcing every student to achieve the key competencies, they have probably not been meeting the requirements of the training package. However, there is a general agreement that the strategy that they have in place is more credible than that outlined in the training package.

Assessment methods

Being so learner-centred, students are given considerable choice in how they go about their course assessments and the nature of the key competencies evidence that they present to the assessor. The course assessment methods available for demonstrating their technical competence include written reports, practical demonstrations, oral presentations, portfolios and interviews. For key competencies assessment, students are able to present documentary evidence, demonstrate to a facilitator or have an interview to discuss, first, their awareness of a key competency, and second, their evidence supporting their self-assessment of their performance in that key competency. Assessors then use the key competency criteria to validate the student's assessment of their own performance.

Both students and facilitators are guided in the assessment process by information sheets describing specific criteria for each performance level for the key competencies that are deemed to be assessable in each of the modules being studied. This approach ensures that there are no problems associated with determining that assessments are pitched at the right performance levels.

Students seeking recognition of their generic skills are required to work their way sequentially through the following process:

- Find out about the key competencies generally.
- Choose a suitable key competency to be assessed as part of a module assessment, having discussed the possibilities with the module co-ordinator when needed.
- Collect an assessment sheet and choose the performance level, having read carefully through the associated criteria. Then use the assessment sheet as a checklist to guide them through the assessment.
- Provide clear evidence to demonstrate how each criterion has been addressed during the module assessment.

The system in place for assessing key competencies is fully based on the performance criteria for each competency at each level being open and transparent to both students and teachers.

In commenting on the validity and reliability of the assessment processes and judgements, one informant noted:

> The procedures used establish validity of assessment by requiring the student to present clear evidence demonstrating that the competency claimed has in fact been put into practice. This conscious process and effort of self-assessment of their practical application of key competencies makes the formal assessment a valid and reliable means of determining that they do in fact have the key competencies as personal attributes.

Centrelink approach

Centrelink provides on-job training to its employees. Thus the assessment approach is tailored to suit the specific needs of people within the organisation. Most workers have significant experience in their area, so recognition of prior learning and of current competence has a high profile in the assessment approach.

The informants are mainly involved in the planning, delivery and assessment of training in the Business Services, Community Services (Youth and Disability Sectors), and the Telecommunications (Call Centre Sector) Training Packages but also in other training packages delivered on job at Centrelink.

Generic skills are not assessed discretely; rather, assessment of generic skills is built into assessment of general work-related tasks that include elements that are generic in nature.

The development of the assessment strategy

Generic skills are integrated at the stage of learning materials development and contextualised to the workplace. Assessment is made on the basis of skills and knowledge checklists. These list things learners should know, what they should be able to access information on, what they are able to do, and the documents that could provide evidence of their competence. Learning materials are developed from the checklists. So generic skills are fully mapped to skills and knowledge and are built in from the beginning of the training development process.

In addition to information on key competencies and 'dimensions of competency'[5] from training packages, Centrelink draws on aspects of generic skills sourced from their own set of 'shared behaviours' to devise their assessment checklists. Centrelink has developed a matrix which maps skills and knowledge against the Dimensions of Competency and the key competencies. In their documentation, Centrelink has also retained transfer skills as a dimension of competency, although it has been removed from the current Australian National Training Authority definitions of dimensions of competency. The matrix is used to develop learning and assessment activities, and assessment tasks (see appendix 6).

A team works centrally to ensure that there is a consistent approach to assessment within all of Centrelink's offices nationally.

The 'shared behaviours'

The Centrelink 'shared behaviours' are part of the way in which the organisation demonstrates its commitment to the Australian Public Service code of conduct and to the Centrelink internal customer charter. They represent the organisation's standard for interaction and service, and are intended to build the image and reputation of Centrelink. The shared behaviours are integral to the organisation's business and team approach and are universally applied throughout the organisation.

The shared behaviours are:

- listening to customers and the community
- mutual respect for our customers and for each other
- exploring and putting in place innovative and cost-effective ways to provide the right outcome
- solving problems and developing opportunities
- behaving with integrity and in an ethical manner.

Information for learners

Learners are given information to assist them to make the link between the elements and performance criteria of a competency, and what this means on the job, with a particular emphasis on alerting learners to what evidence may exist to assist them in their assessment. Many of the tasks they do as part of a team on the job can be used as evidence of their competence. For instance, learners may run a training session and this can be used to claim competence in the 'contribute to the development of a workplace learning environment' competency.

5 The 'dimensions of competency' include basic skills to perform workplace tasks, task management skills, contingency management skills, and job/role environment skills.

Assessment challenges

Centrelink assesses learners across a broad range of training packages, and different work environments produce different sorts of assessment challenges, particularly in relation to generic skills. For example:

> The Call Centre environment is a very difficult environment to work in because it is all very tightly time-framed and scheduling is done anything up to a month or month-and-a-half in advance, so assessment planning has to be very well thought through to ensure they will fit into the on-the-job work context. There are also confidentiality issues that limit assessor ability to do direct observation of learners as they respond to incoming calls. While it would be easy for assessors to use a dual headset this would contravene confidentiality protocols, so assessors need to set up other mechanisms to get around this problem. This may involve reliance on supervisors to carry out assessments, as they regularly monitor service officers' management of incoming calls as part of the supervisory role.
>
> Repeated reliance on the assessment of a particular supervisor is however, not a satisfactory way to carry out the majority of the assessment for a particular individual, so other strategies need to be developed to broaden the assessment approach. This requires innovative task selection.
>
> For example, when assessing team-type competencies, the assessment is based on a team activity which is based on preferred learning styles and the provision of customer service. Learners need to develop service strategies to meet the client needs of a particular client group. Participants take on a range of different roles involving chairing meetings, research roles and problem-solving. Participants are required to respond creatively to changing circumstances during the course of the exercise and to deal with contingencies as they arise, such as changes to the time frame for the meeting or the availability of participants.
>
> Multiple competencies may be assessed at the same time during these activities.

Assessment methods

A range of methods is used to assess generic skills at Centrelink. These include completion of workbooks, supervisors' reports, participation in professional networks and workplace projects. Workplace projects are used as a means by which learners can demonstrate competence in a holistic way, rather than as isolated claims against particular elements of competencies.

And, as recognition of current competencies is a significant component of the Centrelink assessment approach, self-assessment and the use of portfolios of evidence are also significant methods for determining employee competence.

The Centrelink assessment checklists can be used by learners to identify the evidence they need to substantiate their claim for competence. Once identified, the evidence is then collated and submitted to the assessor. The assessor identifies any gaps in the evidence provided and recommends a pathway to assist the learner to gain the necessary experiences. Learning materials also contain self-assessment tasks for the learner to work through to help identify the range of competencies already possessed and those that need to be achieved.

Four types of evidence are typically gathered for inclusion in portfolios. These are direct demonstration and observation of performance, production of reports by learners, presentations to management groups and personal interviews. These interviews are used for clarification and to allow learners the opportunity to explain how they have actually done things in the workplace. These interviews are particularly important for learners who are geographically removed from the assessor.

Some care is exercised in selecting assessable workplace projects because of the impact these can have on staff. Workplace project-based assessment can be quite confronting for staff in that they may feel that, by showing the kind of leadership required for team development and by discussing the learning deficits which may exist in the team, other team members' privacy may be invaded. Therefore, debriefing after activities is considered to be an important part of the assessment process.

Validation of evidence and the assessment approach

Workplace supervisors/team leaders validate on-the-job experience claims by learners, as well as coaching learners within the work environment. The validation process also assists in the authentication of evidence that is submitted.

Centrelink uses a number of consultants to provide their training and to conduct assessments. It is considered that this further helps to validate the assessment approach. The consultants are included in the process of planning assessments and therefore provide perspectives on the assessment processes independent from the organisation's centralised process of planning training and assessment.

Campaspe College of Adult Education approach

Campaspe College of Adult Education uses a modular approach to training in its delivery of the Retail, Assessment and Workplace Training and Office Administration Training Packages. Each program is comprised of modules that may contain several units of competency, including a mixture of job-specific and generic competencies.

Campaspe College of Adult Education does most of its assessment of generic skills itself, as the organisation has limited access to qualified workplace assessors in workplaces. Where they exist, external assessors are used, as this is thought to assist in validating decisions about competence.

The direct assessment of generic skills only occurs when they appear as performance criteria for a unit of competency. In all other instances, the assessment of generic skills is integrated into the assessment of vocational skills.

An assessment matrix is developed for each competency and is used to guide assessors in the selection of appropriate assessment strategies.

Holistic assessment

Campaspe College of Adult Education uses an holistic approach to the assessment of generic skills. The methods used include simulated problem-solving tasks. These collaborative activities include observation of participation and learner self-assessment. Some assessment tasks are used to assess competency in a range of generic skills. In a retail example, the development, implementation and analysis of a store survey is used to gather evidence of learners' ability to collect and organise information, communicate findings, and work in a team.

Assessment of generic skills in workplaces includes direct observation of work practice, together with indirect evidence from supervisors and employers. Employers complete an evaluation of the learner's work placement which provides feedback on generic skills such as attendance, punctuality, attitude, capacity to complete task on time and ability to work with others.

> In the area of customer service and communication it is not so much about your capacity to do a job and perform a function as much as the attitude and the approach that you have to the people you are working with, so assessments are constructed accordingly.

One strategy that Campaspe College of Adult Education informants use to deliver training in generic skills is the 'hidden rules of work' game. This game highlights the different 'hidden rules' that exist within workplaces in different industry areas. It encompasses the expectations that employers have of employees and different workplace cultures. This allows learners to explore a range of issues, including ethical issues.

> For example, the issue of theft is discussed. Most learners agree that stealing should not occur in the workplace; however, in practice some degree of theft is often tolerated and indeed even part of culture of workplaces. For instance builders take home left over scraps of timber, staff take home pens, and car detailers take home coins that are found on the floor of vehicles.

> Employees are never told these rules but they do exist as part of workplace culture. When training packages are reflecting industry practices it is important to learn about the culture of the industry in which people are working. So when training and assessing generic skills to do with ethics and honesty in the workplace are taking place, these issues need to be considered and the hidden rules of work game assists in this process.

ACT senior secondary colleges approach

The Australian Capital Territory senior secondary colleges develop their own vocational courses, based on training packages. The Board of Senior Secondary Studies accredits these courses. Assessors within the colleges are therefore guided by in-house course documentation but may also choose to refer directly to training packages for assessment guidance. The colleges use a modular training framework.

Dual system of assessment

Assessment procedures within the senior secondary colleges differ from the procedures in other organisations included in the study because the colleges assess students for the Year 12 certificate as well as for competency within VET-in-schools programs. The dual system provides some real challenges for assessors due to the mixture of graded and ungraded outcomes.

> Competency is a straightforward 'Can you do this, or can't you do this?', whereas grading looks at different standards of performance. There is no level of performance within a competency. The teacher needs to be able to differentiate performance when they are grading.

The determination of high-level performance in the A–E grading system is influenced by performance in the area of generic skills. For instance, under the A–E grading system, a student may need to show fairly high levels of creativity to be awarded an A grade. Further, attitudes and values are seen as difficult to assess because they are hard to quantify.

> In a classroom context we look more at attitudes that are specific to a particular task or a group of tasks. Attitudes are not put up front as the key outcomes but they are implied by the activity.

Implicit assessment of generic skills

While some generic skills, such as working with others in teams, problem-solving and technology and communication skills, are assessed discretely, they are more often implicitly included in training and assessment in the secondary colleges context. For instance, the use of mathematical ideas and techniques is included when tourism students are required to calculate things like travel time and the distances between countries.

> When we work out things like travel time the kids say to me this is maths and I say yes but don't tell any one, because if you told them you are going to do maths test in tourism they would say no I don't want to do it. So if you teach in this way they enjoy it.

Informants believed that if students could see the purpose of what they were doing, they were more likely to engage with the process. So, contextualising the assessment of generic skills was considered to be important.

Even if generic skills are not clearly defined, they are sometimes assessed anyway. For instance, most units of competency require students to work in a team. Even though the words 'team work' do not appear in the course documentation, students would be advised, in many instances, that teamwork would be assessed.

Holistic task-oriented assessment of generic skills

Most often in this system generic skills are assessed within the context of broader vocational competencies. For example, in hospitality, in the competency 'Provide a link between the kitchen

and the service areas', skills such as communication and working in teams are assessed as part of the operation of the restaurant, while in the competency 'Provide food and beverage service', communication, planning, working with others and in teams, solving problems and using mathematical ideas can all be assessed, as they are necessary elements within the set task.

> You have to come up with an assessment task that is not only going to prove whether the learner is competent or not yet competent, but also being able to grade them A to E. When we first started to assess them we used to have separate assessment tasks, but now we are trying to do both of those things in the one assessment. For example, in the unit 'Source and provide destination advice', students find a client, interview the client, document the outcomes of the interview, gather information about where the client might wish to go and develop an itinerary to match the client's needs. So while that tests that competency, they then also need to present that itinerary in a pictorial presentation, which allows me then to do the A to E grading.

Concurrent assessment of generic skills

The assessment of the key competencies is planned to ensure that they are all covered during the full course of the Years 11 and 12 training program. An activity such as the production of a field report may allow for the assessment of several generic skills to be conducted concurrently. This concurrent assessment process is explained as follows:

> We want them to communicate their ideas in a comprehensive, clear and logical way. They also need to have been able to organise their time. We expect them to work in teams. They have to plan their reports when they have collected their data. They also use technology to generate the report. So the assessment touches on several generic skills concurrently.

Quality assurance strategies

Some of the colleges use an assessment matrix to improve the consistency of their assessment outcomes and to guide assessors, particularly when they have embedded the assessment of generic skills into the assessment of practical work and intend to assess students for both the Year 12 certificate and training package purposes. In addition, all Australian Capital Territory senior secondary colleges conduct moderation days to ensure that common assessment tasks are being graded to the same standard. Where there is explicit assessment of generic skills, their assessment is included in this process.

Constraints and uncertainties

Informants in the senior secondary colleges identified the major constraints on effective delivery and assessment of generic skills to be the lack of clear definition and guidance within training packages and curriculum, and their limited access to workplaces. Consequently, some informants expressed a lack of confidence in the accuracy of their determination of competence.

The implications of being without clear direction in course documentation is emphasised in the following quote:

> [Some] generic skills that relate to preparedness for work are not so clearly spelt out. I wish I could assess some of them. For instance if they continually did not meet the requirements to do certain things such as have the correct attitude, then I would like to be able to show them the door as an employer would do. If they do not meet the requirements, they will not be deemed competent and their Year 12 grading will also be affected. There is a worry that, if challenged, I would need to quantify this, so I do take notes on student's progress.

Further, most VET delivery in colleges occurs on campus. Many students do have part-time employment and they have commonly developed more generic employment skills than have students without a workplace. Students without a workplace complete a vocational placement; however, as this may be of just one week's duration, it is unlikely to be sufficient to develop generic skills. Responsibility for that falls back on the VET-in-schools program teacher.

One college informant expressed the following concerns about the lack of direction given to assessors about what constitutes competence:

> The assessment of competency is complicated. Is it competent within a set time? Do they need to do it just once? Do they have to undertake that task repeatedly with one hundred percent accuracy? There isn't a lot of guidance about what standards are required in the workplace. They don't give guidance about how competent is competent.

Burnley College approach

Burnley College delivers training in a modular format. The modules are based on competencies from the Horticulture Training Package, but typically cover multiple competencies within the one module. The Horticulture Training Package has identified a range of generic skills within a compulsory common core, and Burnley College has voluntarily identified an additional eight core competencies, which are grounded in generic skills, and in which all students are assessed.

Model assessment plans

Burnley College has worked collaboratively with the primary industries curriculum maintenance manager to develop model assessment plans in an attempt to clearly incorporate generic skills into assessment criteria and subsequently into the provision of evidence of competency. Model assessment plans describe the process to be used. They can also be used to record the outcomes of the assessment. The ultimate aim of these plans is to improve consistency in the assessment of generic skills and, in particular, in the key competencies.

Regardless of the competency being delivered, it is intended that the assessment process used by a range of different training providers be commonly interpreted and consistently applied. This has involved listing different assessment evidence that various providers agree encompass the key competencies. The model assessment plan system is still being refined.

The two-tiered assessment system

Burnley College uses a two-tiered system for the delivery and assessment of modules. The first tier focusses on the delivery of content material and underpinning knowledge. The second tier, which involves the students undertaking structured workplace activities, requires the application of that knowledge according to workplace standards and practices. The assessment of first-tier knowledge reveals what students know about the topic, and assessment of the second tier reveals whether they are competent to apply that knowledge in a way that reflects industry practices and standards.

The informants consider that this approach is important because a large proportion of the students attending the college are school leavers with no prior knowledge or skills in the area of horticulture.

Holistic assessment within modules incorporating several competencies

The delivery and assessment of several generic skills is achieved by the use of modules that combine several competencies. For example, Meet employment requirements, Cooperate in the workplace, and Plan daily work routines are combined with an additional Burnley College core competency, Develop teamwork, to provide an integrated approach rather than dealing with the competencies on an individual basis. Delivery and assessment of the combined unit is workplace based.

Use of portfolios to assess generic skills

While assessment of the first tier of delivery is based on traditional ways of assessing theoretical knowledge, such as written tests, reports and assignments, assessment of the next level involves

the collection of evidence for inclusion within a portfolio. In the workplace, students are required to work their way through a series of structured workplace activities directed by learning guides. Part of this delivery and assessment focusses on the students' attainment of key competencies. Students are required to document the outcomes of this activity. The evidence submitted in the portfolio is countersigned by the supervisor in the workplace, which assists in the validation of students' achievement of competence.

Constraints

Interestingly, informants expect that most school leavers will already have developed generic skills, such as communication skills, and the foundational skills of literacy and numeracy. This has not always proved to be the case. Consequently, the suggestion was made that there is a need to pre-test students for these generic and foundational skills to allow for early detection and provision of assistance rather than waiting until the lack of such skills emerges as a barrier to their successful completion of the second tier.

Further, many students at Burnley College are part-time students and may be doing as little as one competency per semester. This means that they do not have the opportunity to tease out a range of generic skills that are peculiar to a series of competencies, such as analysis or management skills. It was mentioned that if the college had a larger full-time student population, then an integrated approach to the development and assessment of such things as analytical skills could be undertaken.

Spencer Institute of TAFE approach

Spencer Institute of TAFE is a large public registered training organisation in South Australia that caters for the training and further education needs of people within the region through a network of 17 campuses and numerous study centres. One of its major strengths is an emphasis on open learning, flexible delivery, video and audio-conferencing, computer-based learning and open entry and exit.

The informants to this project were trainers and assessors within the community services and health team providing a flexibly delivered program in the Diploma of Community Services (Children's Services). The training delivery and assessment is conducted flexibly, utilising learning guides (encompassing learning and assessment materials) in booklet format. In addition, students' acquired skills and knowledge were assessed on the job in work placements. Students are supported by individual tutors specialising in the unit of competency(ies) utilising email, mail and telephone contact.

General approach

In general, generic skills including the key competencies are not assessed directly, but are embedded in the learning guide tasks and assessed during work placement. Discrete generic skills such as the units of competency: Work with others, Undertake administrative work and Communicate with people accessing services of the organisation, are assessed in a similar way to all other units of competency delivered within the program. Further, within each work placement, a suitably qualified person assesses students on their 'professional skills'. These particular skills are discussed in the following pages.

To facilitate effective learning and assessment, units of competency are grouped in 'blocks', and prior to the end of each particular 'block', students are required to undertake a work placement to ensure that the grouped units are formally completed and assessed. In some instances, students may also undertake their work placement on a part-time basis over an extended period of time.

Assessment strategies

The assessment guidelines within the Community Service Training Package indicate that:

> Assessment of competency in the Community Services Industry is unique in that it cannot rely solely on a measurement approach; competency in the industry includes a complex interrelationship of duty of care, ethical behaviour, and personal values in the context of provision of high quality service to individual clients.

Therefore to assess within the requirements of this training package, the team at Spencer have developed a complex and extensive process of assessment utilising both direct and indirect evidence.

A range of assessment tasks has been developed for the campus-based assessments. Each task is mapped to the elements (or indeed performance criteria) within the unit of competency. Assessment methods utilised for generic skills that are discrete units of competency within the training package include written assignments, reflective practice exercises, portfolios and case studies.

Assessment of the students' 'professional skills' and attitudes is undertaken during work placement. The aim of this assessment is to bring into focus for students how they can apply and integrate their generic skills and knowledge in a workplace context. It prompts students to take responsibility for their own work practices and to meet the expectations of their host organisation. Assessment involves direct observation of a range of skills and workplace attitudes, covering adherence to workplace policies and procedures, including confidentiality, effective communication in line with work placement requirements, organisational ability (in terms of their folder, daily plans and placement plan) initiative, willingness and constructive evaluation of own performance. Other criteria include punctuality, reliability, and the maintenance of units of competency previously assessed.

For all assessments conducted during work placements, learning guides include an on-the-job assessment form that pertains to the particular competency being assessed. Generally, assessment involves direct observation of work practice that is verified by both the registered training organisation staff and a supervisor in the workplace. This form also allows for comment by the workplace supervisor and enables the student to address any issues related to their acquisition of generic skills and attitudes. Each of these assessments is filed in the individual student's file for review by their assessors (competency facilitators) or pastoral care facilitator.

Reporting and certifying generic skills

Generic skills are only reported and included on academic records or certificates when they appear in training packages as discrete competencies or in course documentation as discrete modules.

Most informants to the study indicated that, as their systems for reporting and certifying generic skills had not yet been fully developed, generic skills were typically not being certified. The electronics and information technology area at Torrens Valley TAFE is an exception in that they have developed a clear system by which generic skills are recorded and certified. It should be noted, however, that this approach does not extend across the whole of that institute. In essence, the example outlined in the following pages is a pilot program.

Informants from Centrelink, Burnley College, Campaspe College of Adult Education and the Australian Capital Territory senior secondary colleges indicated that their assessment records are based around the attainment of learning outcomes or units of competency, many of which incorporate generic skills. When generic skills appear in the performance criteria for the competency, they are formally recorded, otherwise it is less likely they will appear in any formal registered training organisation documentation.

Many informants indicated that informal records relating to learners' acquisition of generic skills are maintained in order to assist assessors in reaching an assessment decision, but that these notes do not form part of the formal assessment records. The Australian Capital Territory senior secondary colleges do use the process of periodic student progress reports to report on generic skills, such as students' attitude to their work.

At Spencer Institute of TAFE, generic or common stand-alone key competencies are recorded, reported and certified as per all other endorsed units of competency within the training package. However, the additional assessment of 'professional skills' at the workplace means that a record is filed but competence is not reported or certified in any way. This poses a dilemma for the provider, as the assessment of the employability and professionalism of the learner is considered a recording and reporting mechanism of the learner skills as well as an important feedback tool, but formalisation of it is not possible given the training system.

Electronics and information technology system

'Student managed attendance roll tracker and resource selector' (SMART) software is utilised by Torrens Valley TAFE to manage their flexible learning environments. When implementing the key competencies assessment strategy, this software was modified to allow:

- recording of explicit assessments results against the key competencies
- viewing of details of the number of successful assessments for each of the three performance levels for each competency
- viewing and modification of the 'comments' screen which identified and described each successful assessment activity.

Box 2 provides an example of the information displayed.

Box 2: Example

Key competency	L1	L2	L3
Collecting, analysing and organising information			
Communicating ideas and information		1	
Solving problems			1
Working with others and in teams	2		
Using mathematical ideas and techniques			
Using technology			
Planning and organising activities			

Communicating ideas and information, Level 2. 1st try

Assessment item (on 05/09/2000) for:

Module: SELF MANAGEMENT

Assessment: 3 Attend Interview Techniques Tutorial

Through a mock interview there was clear evidence of comprehensive preparation and demonstrated competence with a variety of communication strategies.

In this way, the results of the assessment of key competencies are formally recorded on the SMART software within the teaching department. The results, however, are not then transferred to the official academic records maintained and reported by the college.

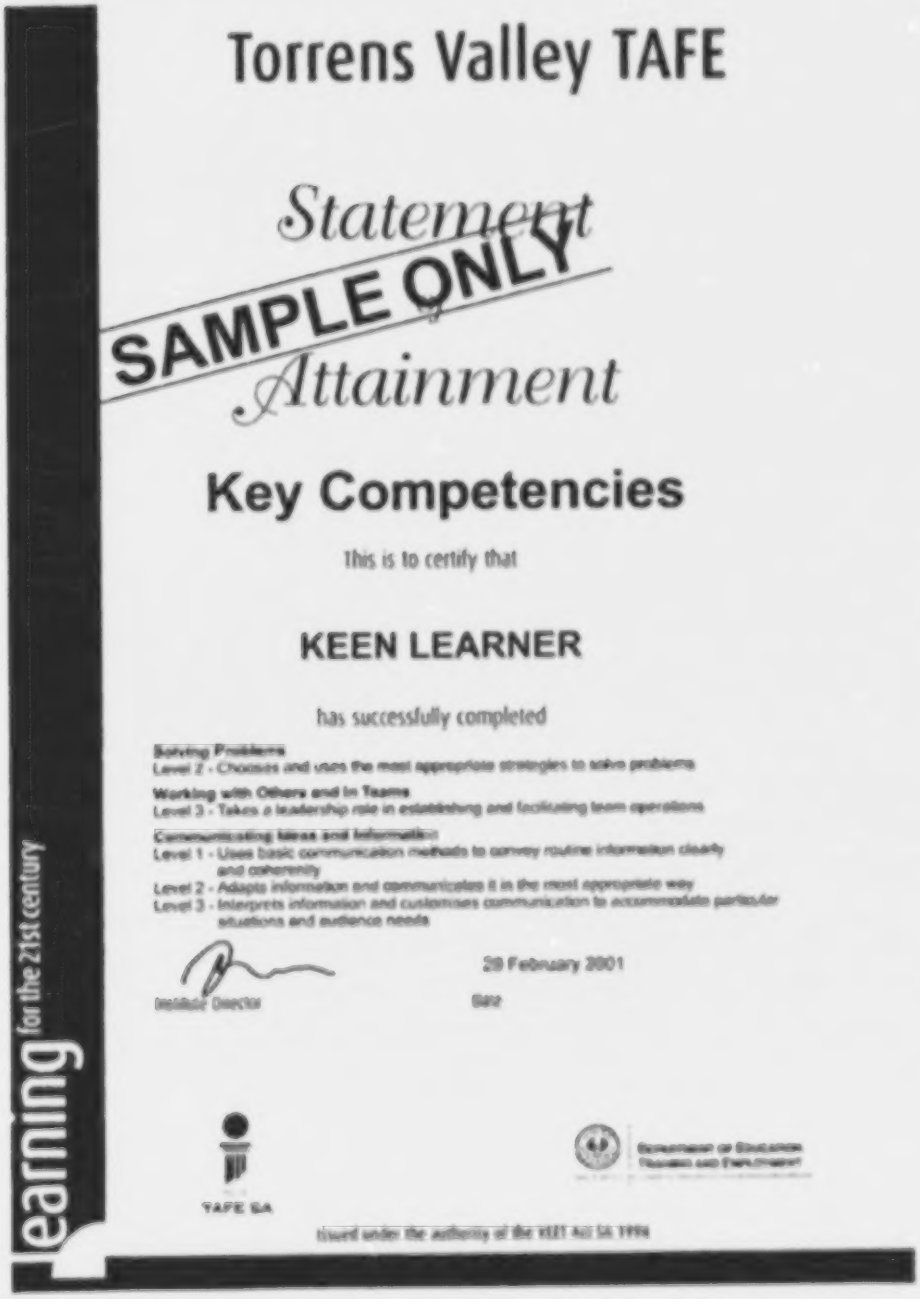
This final step of officially recognising key competencies as an explicit component of certified student results is not taken because it would cause significant administrative problems. One informant commented:

> The majority of us in this team believe that reporting key competencies on an academic record has a number of problems. The first is that the whole management system would have to have the capacity to handle the results. The other is that if they were handled as other subjects are, people would have to enrol and pay for doing the five key competencies. If they had a choice under these circumstances, they wouldn't do it.

In order to certify the outcomes of student achievement of the key competencies, Torrens Valley TAFE provides graduates with an officially endorsed statement of attainment. Thus, learners who successfully complete the technical aspects of their training together with the key competencies receive not only a certificate but also a statement of attainment.

To ensure that potential employers and other stakeholders understand what this additional certification means, the electronics and information technology department provides a brochure entitled 'Key competencies ... personal skills for the workplace' which explains in simple terms about the competencies, why they are seen to be important and how they are assessed. Also included in this brochure is a sample statement of attainment, the reverse side giving a summary of the five key competencies being addressed and an explanation of the three levels for each competency.

Figure 2: **Sample statement of attainment for electronics and information technology. Torrens Valley TAFE**



Torrens Valley TAFE

Statement of Attainment

SAMPLE ONLY

Key Competencies

This is to certify that

KEEN LEARNER

has successfully completed

Solving Problems
Level 2 - Chooses and uses the most appropriate strategies to solve problems

Working with Others and in Teams
Level 3 - Takes a leadership role in establishing and facilitating team operations

Communicating Ideas and Information
Level 1 - Uses basic communication methods to convey routine information clearly and coherently
Level 2 - Adapts information and communicates it in the most appropriate way
Level 3 - Interprets information and customises communication to accommodate particular situations and audience needs

Institute Director

29 February 2001

Date

learning for the 21st century

TAFE SA

Department of Education, Training and Employment

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Learner perspectives on generic skills

In addition to gathering the views of practitioners in each of the nominated registered training organisations, this study also sought to interview learners wherever possible. The assessment managers in each organisation were asked to invite learners involved in relevant training programs to participate in the study. A total of only six learners in three of these organisations (Centrelink, Spencer Institute of TAFE and Torrens Valley TAFE) agreed to participate. The aim of these interviews was to determine how familiar they were with generic skills and how well they understood them. At the same time, they were asked to describe the information that had been supplied to them by their provider and to make an assessment of the value of generic skills in the industry for which they were training.

General understanding of generic skills

The Centrelink learners were familiar with the term 'generic skills' and revealed a high level of recognition of the Mayer key competencies. At the same time, they also identified additional generic skills. Some are personal in nature, such as willingness to embrace change, values and ethics, knowledge of own learning style, ability to pick up knowledge required to function in different business environments and self-management and time management skills. Others are interpersonal in nature, such as ability to interact with people at different levels within the organisation, team building, customer service skills, and flexibility when working with others and clients. They also nominated the Centrelink-formulated 'shared behaviours.'

The Torrens Valley learner, who had just completed his course, nominated to be assessed against the key competencies, although the teaching department had only introduced the new approach when he was part way through his training. He was uncertain about the term 'generic skills', but he was thoroughly aware of key competencies, outlining that they were competencies that focussed on 'his abilities to plan, communicate and manage [himself]'. Like the learners from Centrelink, he was able to explain what the competencies covered, and extended the concepts by including terms such as self-management, personal qualities and values and attitudes.

By contrast, the knowledge of students from Spencer Institute of TAFE regarding generic skills was limited. However, the students were able to identify discrete generic/common units of competency within the training package and also alluded to embedded competencies such as: work and study skills, self-management, communicating ideas and information, organisational management, time management and such attributes as honesty, work ethic and patience.

Valuing generic skills

A learner at Centrelink expressed her evaluation of generic skills thus:

> Generic skills are important at a personal level to ensure that you are up to standard and that what you are doing and the information you are giving out is correct. At a team or centre level they are important to make sure things are as uniform as possible, so you have got consistency in what people are doing.

It was mentioned that in the customer service area, generic skills are probably more important than technical skills:

> ... because of the customer focus in the customer service area, there is no point if you have a way of working that does everything 100% correct, but leaves the customer unhappy, then it defeats the whole purpose. You can't provide customer service without team support and problem-solving ability. You can't do it without interpersonal relationship skills.

Another learner thought that generic skills are underrated and that they can be improved on through training: 'these skills can all be learnt, they're not just something someone's born with. They are valuable tools that, like technical skills, can be improved'.

In responding to the question about the importance of generic skills in his industry, the Torrens Valley TAFE learner cited having the key competencies as being very important. Collecting, analysing and organising information and Solving problems, he saw to be equally the most important. These two competencies, he considered, provided him with the skills to work out how to do things better in his work environment. In addition, he acknowledged the importance of Working with others and in teams as it was influential in how you 'got on' in the workplace.

Further, he emphasised the value of being able to personally assess various ways of achieving specific work outcomes. He commented:

> If you can use self-assessment you will go further in the workplace. You need to examine how you go about things. If you don't know how you go about things, you will not be able to work out what can be improved.

Both respondents at the Spencer Institute of TAFE considered generic skills to be important and noted that, without such skills as personal management and organisational skills, they could not successfully complete the vocational competencies.

Information supplied to learners

Only when the generic skills are incorporated into the learning outcomes for the unit do Centrelink learners receive formal advice—in the form of a handout and a booklet—about which generic skills will be included in the training and how they will be assessed. Informal verbal advice is also given, and meetings are convened to clarify what generic skills will be covered in training sessions.

> Once a work task has been completed the supervisor might identify a generic competency that has been covered and suggest that the learner could be assessed for it and how you could demonstrate competency to the satisfaction of the person who was assessing the course. We were also provided with lists of types of evidence that could be produced to meet the competencies.

It is accepted that learners who are engaging in on-job training have information about generic skills to guide them when they put together their portfolios of evidence.

Little hard copy information had been provided to Spencer Institute of TAFE students regarding embedded key competencies, and nor had direct information regarding the key competencies been presented in the student materials. However, extensive information had been provided to students regarding both the theoretical component and the workplace assessment of all units of competency. Additional information and rationale is provided to students regarding the additional assessments related to their 'professional skills', conducted by work site supervisors. The requirements of the students are listed and explained.

In discussing the information supplied by his registered training organisation, the Torrens Valley TAFE learner explained:

> We got plenty of explanatory information in written notes, on the intranet, on the local drive in the study centre and the opportunity to find out any further information was easy and encouraged. We were continuously prompted about them. Even the screen saver or the wallpaper on the PC was a key competencies prompt. This was all pretty good.

Much of the information that is provided to learners relates to the assessment of the key competencies. From this learner's perspective, what was required of him was very clear. He had taken the opportunity to speak to the key competencies co-ordinator about how he could be assessed at each of the three levels.

> He explained what would be expected and gave me some examples of the various activities. The levels were clear to me—the higher the level, the more would be required to demonstrate achievement of the competency. It needed a lot of thought about the criteria and it required numerous discussions until I got it clear what I might do.

The process of assessment

The Centrelink learners were generally satisfied with the assessment approach that had been used. They indicated that the meetings prior to commencement of workplace projects have helped to clarify exactly what is required of them and what generic skills are being covered. This is considered to be particularly important when learners are engaged in training as individuals within the workplace rather than in groups. It was thought that the meetings could help to overcome a sense of isolation.

One learner suggested that grading of competence would make the learning and assessment process more meaningful for individuals.

> The process could be improved if they had a scale, because while we have been told yes you can do this, there hasn't been a scale as to how well you have done it.

Given that the learners are being assessed on the job, it is not surprising that they suggested that generic competencies should be demonstrated in the workplace:

> I think the focus should be on what's going on in the workplace and how competent learners are in the workplace.

And again:

> People doing the certificate are required to write a little essay on each topic and some people might have excellent customer service skills and problem-solving skills but they're not necessarily any good at writing an essay. Others can write down exactly what the theoretical situation requires, but they can't relate to people in a face-to-face interview, which is where it all comes together in the workplace.

It was suggested that the best way to build generic skills is to involve learners in workplace projects that expose the learners to the modelling of strong generic skills.

Commenting on the process of assessment, the Torrens Valley TAFE learner suggested that combining the assessment of technical skills and knowledge with assessment of the key competencies worked well and made the latter seem so much more relevant to him. More importantly, having to work out how he could demonstrate the achievement of various key competencies not only focussed his learning, it also offered the opportunity for him to build additional skills.

When initially being assessed, he did find the presence of two assessors, one for the technical skills and one for the key competencies, somewhat intimidating. He assumed that because it was in the early implementation period, the teachers were just double-checking what they were doing. In some of these early instances, the teachers were likely to have been validating the assessment process and the judgements that they were making.

This learner was also able to offer some insights into the additional workload required by the Torrens Valley TAFE approach to assessing generic competencies:

> In comparison to the actual technical topic, it required a bit more work. It was manageable. In a two-week subject, the gathering of material to demonstrate achievement of a key competency took maybe an extra day. That's how long I took, anyway.

Certification of generic skills

The Centrelink learners suggested that it would be helpful to have separate certification for generic skills:

> Generic skills should be listed on a separate academic transcript as you can take that to your next employer if you had to.

The Torrens Valley TAFE learner also considered that the idea of a separate statement of attainment was the best approach:

> I would prefer that the key competencies be not included on the printout with other results. They should be kept separate because I think if they are blended it might diminish the importance of the key competencies. They will get lost and your achievements will not be noted. Keep them separate—it is good to have two pieces of paper.

While recognising the value of pieces of paper, he did raise the issue of his employer's lack of understanding of these generic competencies. He suggested that the statement of attainment relating to his achievement of the key competencies was perused, but that his employer was more interested in the results on his academic record. Interestingly, the Torrens learner made the following comment about employers:

> They want these skills, but whether they know they are the key competencies, that is another matter. They do not make any connections between them. They are thinking that it is another piece of paper, like a first aid certificate and that sort of stuff.

In summary

Despite the small size of the sample of learners, those who agreed to participate added a valuable perspective to this study. Generally, it could be said that learners' levels of awareness of, and appreciation of the complexities of, generic skills were consistent with those of their teachers and assessors. Those learners who had been provided with the most comprehensive information about generic skills and their assessment were able to discuss these topics with some sophistication.

They tended to agree with their teachers and assessors in their assessment of the value placed on generic skills by industry, and of the need to further promote these skills in a formal way. Some of the learners suggested that separate certification of their attainment of generic skills would be helpful.

Conclusions

The findings of this investigation of the assessment and certification of generic skills in six registered training organisations provide indicative information about the way generic skills are incorporated in training packages, practitioner understanding of generic skills and about the ways in which they assess and certify them. The findings also give a glimpse of learners' views of the usefulness of generic skills. The research highlights those factors which practitioners themselves identified as being critical in generic skills assessment. Finally, the report considers the implications of these outcomes for vocational education and training in Australia, and suggests a number of strategies that would raise the profile and valuing of generic skills.

Incorporation of generic skills in training packages

From the audit of training packages conducted prior to commencing this study it was evident that generic skills are incorporated in a range of ways. They appear as discrete competencies or they are embedded within vocational units of competency. Sometimes they appear as explicit performance criteria and at other times they can only be implied.

The responses from informants involved in this investigation confirmed that it is this latter category which causes them the most concern and which poses the greatest challenge in delivery and assessment.

More importantly, there is a common view among practitioners that key competencies are not clearly described in training packages and that generic skills are even more difficult to identify. While awareness of key competencies is quite high, many practitioners are unclear about their implications or how to interpret them. While there is such a degree of uncertainty about identifying and interpreting generic skills, there can be no consistent approach to assessment of them.

It should be reiterated that most of the people interviewed were commenting on their experiences in delivering the first version of their training packages. The Australian National Training Authority has developed a comprehensive set of guidelines to ensure that key competencies are more explicitly incorporated into new and revised training packages. Thus, this issue has, in part, already been addressed for those developing training packages. However, the challenge remains to communicate this changed approach to practitioners.

Some of the informants who felt that generic skills have been given too little emphasis in their particular training packages have enhanced the profile of these skills by borrowing a range of generic skills from other training packages.

The main changes that need to occur in training packages, in relation to the incorporation of key competencies and generic skills, relate to making them more explicit, while providing more extensive guidance on delivery and assessment.

Understanding generic skills

While there is fairly universal agreement in the literature and in the field regarding the importance of the role of generic skills for workers in the 'new economy', agreement regarding what is meant by the term 'generic skills' has yet to be achieved.

Most practitioners are familiar with the key competencies, and they understand the concept of generic skills, although they may not use the same language when talking about them. Their opinions tended to be informed by personal perspectives rather than by formal policies or guidelines. Terms such as 'work readiness', 'professional skills', and 'employability skills' are commonly used to describe groups of skills relating to attributes, values, attitudes and other qualities, which, while personal in nature, are nonetheless related to work.

Many of the practitioner informants expressed a degree of confusion and awkwardness when talking about the concept of generic skills. Others, who had actively worked to develop a thorough understanding of key competencies and how they might be applied in a training and assessment situation, were much more comfortable with both the language and the concept.

Despite this diversity of views about the language and the application of the concept, practitioner informants noted that industry valued generic skills highly. They are seen to be critical to the effective performance of vocational tasks and crucial to lifelong learning. There was less certainty amongst practitioner informants about how generic skills are valued by individual employers. Some suggested that they are undervalued, while others contended that they are valued, but are simply not known as 'generic skills'. Clearly, there is a need to actively promote the vocational relevance of such skills to both industry and employers. More importantly, this promotion needs to be tailored to the needs of specific industries and individual enterprises. A generic presentation of the value of generic skills cannot realistically be expected to accommodate the needs of all businesses.

From the information provided by practitioner informants it is evident that generic skills need to be more explicitly addressed in training packages. More importantly, there is a clear need for specific directions on where the opportunities may be for the assessment of generic skills, together with examples of the tools to undertake the task.

Assessment of generic skills

Informants to the study expressed concern about the lack of clarity in describing generic skills in training packages, and the lack of guidance on how to assess them. It would be expected, therefore, that this would have a direct bearing on the approaches that they employ to assess generic skills.

Where generic skills are represented as discrete units of competency or performance criteria, practitioners in this study have little difficulty in teaching and assessing them. When they are embedded in units of competency, they are more of a concern because learner achievement of them must be inferred. Valid inference requires clear guidance, and currently the assessment guidelines within training packages provide inadequate support for practitioners.

Generally, informants are not directly assessing generic skills unless they are discrete units of competency. The assessment methods being employed are similar to those that are used to determine technical competence. Often, generic skills are simply inferred after successful performance of work-related tasks.

A number of informants indicated that they found determining what performance looks like at each of the three key competency levels quite problematic, although the approach adopted by the electronics and information technology teachers at Torrens Valley TAFE is an example that others could follow.

What has proven to be important in the development of assessment strategies for generic skills is the collaboration that has occurred with other assessors. In some instances, with limited guidelines to follow, practitioners have adopted this strategy in order to gain a degree of consistency in their assessment approach and judgements. In other instances, assessors have developed clear guidelines, performance benchmarks and assessment matrices to assist in consistent decision-making.

In most instances there has been no parallel development of guidelines for learners on the assessment of their generic skills; instead, more emphasis has been placed on providing information of a more general nature on assessment. Quality information on the assessment of generic skills, together with ongoing support for learners, can have a significant impact, as is demonstrated by the approach adopted in the electronics and information technology program at Torrens Valley TAFE.

Reporting and certifying generic skills

While there is no national policy that requires registered training organisations to formally record, report and certify generic skills, there is little likelihood that training providers will actively seek to do so. Centrelink records the attainment of generic skills on their assessment matrices, but the other organisations in this study have no formal strategy in place to include generic skills in their formal records of learner achievement.

The electronics and information technology team has developed an informal system for certifying key competencies and this is supported by software which is specifically designed to manage student records in a flexible learning environment. This system, however, does not have the capacity to automatically translate these informal records to the institute's formal academic records system.

The major disincentive for the recording, reporting and certifying of generic skills in every registered training organisation is that it requires them to have a student management system capable of handling the multitude of results that would be generated. Further, given the current systems of fee payment in place within registered training organisations, the development of explicit generic units of competency would have considerable financial implications for learners, which they may be unwilling to bear.

Learner perspectives on generic skills

Despite the diverse learning environments and the different approaches to the delivery and assessment of generic skills in which these learners found themselves, all were able to describe generic skills in their broadest terms, and valued them very highly. It therefore would seem appropriate to assume that raising the profile of generic skills in the delivery of VET programs to a level where they are explicitly addressed, assessed and understood by learners, should not be too difficult a task. It is evident, however, that the provision of quality information that clarifies the behaviours and forms of evidence required is as essential for learners as it is for teachers and trainers.

In summarising his experience with the electronics and information technology model of generic skill assessment, the learner commented that, while the statement of attainment was useful, working out how to address the criteria attached to the competencies was even more useful. This learner exemplifies the meta-generic skill discussed in the literature review: 'the ability to conceptualise and articulate possession of generic skills'.

> The whole process helped me to examine the criteria and to find out what was really being looked for. It is about working out what is really required ... I learned to focus my thinking and that has been my most important learning. You will not get a job and keep it if you are not able to do this.

Critical factors in generic skills assessment

Generally, the critical factors in generic skills assessment are no different from those required for any valid, reliable, flexible and fair assessment. However, because generic skills are less explicitly described in training packages and key competency levels are difficult to determine, there is considerable potential for invalid judgements to be made about the quality of learner performance.

Practitioners expressed disparate views about the place and the agency of learners in the assessment process. A number of informants suggested that assessment of these skills should be subtle so that learners do not have the feeling that this is an increased burden upon their learning of vocational skills. Others, however, considered it crucial that learners be at the centre of the learning and assessment of generic skills and that they play a significant role in the ultimate assessment decision-making. In particular, these informants see as critical the development of the learners' ability to self-assess generic skills, since this is the key generic skill they need to ensure their employment and continued employability.

Some practitioners place considerable emphasis on the quality of information provided to learners, assessors, employers and other users of the assessment outcomes. This information needs to be well designed, clearly articulated, comprehensive, pitched at an appropriate level for the users, and readily accessible. Evidence from this study indicates that where considerable effort has been put into the provision of quality information, levels of awareness of generic skills have been raised and there has been a greater level of commitment by learners and practitioners to the recognition of these skills.

Information to support assessment decision-making, such as guidelines for evidence collection, which includes the delineation of performance requirements or benchmarks, must be developed to ensure consistency across assessors and across and between registered training organisations. It is also crucial that assessors themselves understand what generic skills are and know how they might be manifested in behaviour. Without such understanding, it is unlikely that effective delivery and assessment will occur.

One important element concerning information relates to assisting learners to recognise the multiple opportunities they have for assessment of generic skills. This requires that not only learners but also practitioners have a good understanding of where generic skills are located in the learning process. It is also important to encourage learners to have these skills recognised. Delivery and assessment must be sufficiently flexible to ensure that these opportunities can be readily accessed.

It was also stressed by a number of practitioner informants that, where learners are undertaking their programs in flexible learning mode, the building of their generic skills is essential for their success in such environments. Self-directedness, motivation and the ability to organise themselves and the material they are learning are therefore crucial skills.

Information gathered in this study indicates that an integrated approach is the preferred mode for assessing generic skills; that is, an approach in which technical or vocational competencies and generic skills are assessed together in the context of whole work tasks.

Informants suggested that the development of a fully fledged system for the collection of evidence (which might comprise competency records books, checklists etc.) was essential for the effective assessment of generic skills. Many of them expressed some frustration that these systems had not yet been fully developed within their organisations.

In addition, informants acknowledged the importance of quality-assuring the processes, the assessment tools and the decisions they make about learner competence. Some expressed a level of concern about being able to check their assessment processes and outcomes against those of others. Working in isolation without any idea about how people were going about the same process means practitioners are not making confident decisions about competence. Strategies to review, compare and adapt assessment would assist them in developing valid and consistent approaches, as would clear delineation of evidence requirements and benchmarks.

A consistent comment from all practitioner informants was that specific resources and funding need to be dedicated to the assessment of generic skills to enable it to be done properly. Several

registered training organisations in this study have made a considerable commitment to the development of comprehensive approaches for assessing generic skills because they are intrinsically linked to their organisational mission and values. The provision of time and space for people to be involved in working through the issues has been identified as vitally important, as has the need for professional development for staff after strategies have been developed. The active involvement of key players in the development, implementation and review processes are crucial to effective delivery and assessment of generic skills.

There was also some suggestion that, without national policy that supported appropriate resourcing of the assessment of generic skills together with national strategies for certification, the acceptance of generic skills would remain problematic. This is particularly the case where generic skills are being inferred and go unreported.

It should be emphasised, however, that these issues are very similar to those that are constantly raised by practitioners discussing competency-based assessment in general, and do not constitute anything which is unique to the assessment of generic skills.

Implications of findings for Australian VET

Any future strategy to re-vision and extend the introduction, assessment and certification of generic skills in vocational education and training programs must take into account the uneven manner in which key competencies have been implemented since the introduction of training packages. Inconsistencies of approach and uncertainties about interpretation, combined with a stress on inference of competence, rather than direct assessment of achievement of competence, has meant that key competencies have remained relatively undervalued by learners and employers.

There is a need to raise the profile of generic skills within the Australian VET system. This could, in part, be achieved by reframing current VET policy to give generic skills a more prominent place. The policy would need to include a clear definition of what generic skills are meant to encompass, taking into account the findings of the range of current research on the topic. The positioning of generic skills could then be further enhanced by the development of policy to provide practitioners with clear direction on which generic skills should be delivered and assessed.

For generic skills to be accepted as a critical component of training, they must be actively promoted as valuable competencies to achieve. Such promotion should be directed at VET practitioners, learners and employers. Promotion strategies need to take into account the current confusion of views surrounding the language of generic skills. Such strategies should be tailored to suit the needs of these key players.

To assist in motivating learners to actively engage in acquiring generic skills, consideration should be given to their formal certification. One option would be the development of a form of certification for generic skills separate from the current arrangements for the certification of vocational competency. The issue of how this could be made cost-neutral to learners would also have to be addressed because learners are unlikely to elect to be assessed for competence in generic skills if they are required to pay extra for them.

Any formal certification of these skills would require registered training organisations to be able to manage and report upon the results. Student information management systems, record-keeping strategies and policies would need to be modified and funding would need to be allocated for this purpose. Alternatively, a record-keeping system for generic skills could be centrally developed and made available for use by interested providers.

There is also a clear need to revise the way that generic skills are incorporated into training packages. Any revision should ensure that the place of generic skills is made more explicit. There is a requirement to resolve the question of the extent to which generic skills should be embedded

into units of vocational skills, or alternatively, included as discrete competencies. In addition, considerable benefits would be gained by ensuring that generic skills are incorporated into training packages in a way that is easy for practitioners to interpret and which minimises the possibility of inconsistent outcomes in their assessment.

The incorporation of generic skills into performance criteria would increase the degree of confidence that practitioners have in assessing them. More extensive advice on how generic skills should be assessed would also assist practitioners. The provision of models of good assessment practice, exemplar and benchmark materials, strategies for consistent assessment decision-making, options for record keeping and guidelines for the development of information on generic skills assessment for practitioners and learners would encourage practitioners to implement more effective generic skills asssessment.

More importantly, for VET practitioners to deliver and assess generic skills, they require their own skills, knowledge and attitudes to be enhanced.

Future directions for consideration

In light of these conclusions, the following ways in which to enhance the place of generic skills within the Australian VET system are offered for consideration:

- the augmentation of national policy to include a framework for the reporting and certification of generic skills
- the allocation of funding to state systems and registered training organisations to develop student information management systems, record-keeping strategies and policies to support the full implementation of such policy
- the development of a comprehensive strategy which promotes the value of generic skills to key stakeholders
- the provision to training package developers of the resources to more explicitly identify generic skills within training packages, together with strategies for identifying opportunities for their assessment
- the development and dissemination of assessment resources to practitioners to support effective generic skills assessment
- the formulation of professional development programs which are then offered to practitioners to build their skills and knowledge about the delivery and assessment of generic skills.

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Appendices

Appendix 1: Interview schedule and protocols

Interview schedule

Assessing and Certifying Generic Skills: Questionnaire

Respondent's Name:	**RTO:**

1. Which TP are you delivering/assessing?		
A. General understanding		
2. Are you familiar with the term "generic skills"?	Y	N
3. If NO, are you familiar with the "Mayer/Key Competencies"?	Y	N
Prompt them to expand on their understanding of Mayer/Key Competencies		
4. If YES, can you describe what they cover?		
Indicate which of the following possible responses are given:		

Mayer/Key Competencies		Other generic or key skills (NCVQ, SCANS, Finn, etc)			
Collecting, analysing and organising information		Self management		Values and attitudes	
Communicating ideas and information		Improving own learning & performance		Cultural understanding	

Planning and organising activities		Work & study skills		Ethics	
Working with others and in teams		Information technology		Customer service	
Using mathematical ideas and techniques		Modern foreign languages (LOTE)		Willingness to embrace change	
Solving problems		Personal qualities		Practicality & business orientation	
Using technology		Understanding systems		Environmental awareness	
		Management skills		Research & project management	
Mayer/Key Competencies		Soft skills		Core skills	
Other (personal perspectives):					

B. Your Training Package (TP)

5. What place do GS have in your TP? (Which are included/ outlined/ mentioned?)

Collecting, analysing and organising information		Self management		Values and attitudes	
Communicating ideas and information		Improving own learning & performance		Cultural understanding	
Planning and organising activities		Work & study skills		Ethics	
Working with others and in teams		Information technology		Customer service	

Using mathematical ideas and techniques		Modern foreign languages (LOTE)		Willingness to embrace change	
Solving problems		Personal qualities		Practicality & business orientation	
Using technology		Understanding systems		Environmental awareness	
		Management skills		Research & project management	

Other:

6.How much emphasis is given to generic skills in your TP?	Too much	About the right amount	Too little

7. Please expand

8. What, if any, changes need to be made to the TP to better deal with generic skills?		
(Encourage participant to place themselves in the position of an employer who has taken on a recent graduate and to consider what additional skills, if any, the graduate would need to have to ensure that they were prepared for the demands of a real workplace)		
9. Are GS listed as discrete/stand alone competencies?	Y	N
10. Are GS integrated or embedded in other competencies?	Y	N
11. Are GS clearly described in the TP?	Y	N
12. If YES, what methods do you use when assessing them? (*Ask for examples*)		
13. If NO, do you assess them anyway?	Y	N
14. If YES, what problems does this present for assessing them? (*Ask for examples*)		

15. Do you have guidelines to help you assess these skills?			Y	N
16. If YES, where/how were these developed?				
TP resources		Other		
(Ask for samples)				
17. Have you talked to others about how these should be assessed?			Y	N
18. If yes, with whom have you discussed the assessment of generic skills?				
19.What have been the outcomes of the discussions? *(i.e. agreed strategies/ development of a tool)*				
20. Is the assessment of GS different to the assessment of other skills?			Y	N
21. If YES, how?				
22. What would the consequences be if a learner was deemed Competent in the "vocational" aspects of a competency, but Not Yet Competent in the generic skills aspect of a competency? *Insert a relevant example. For instance, the student can propagate plants from cuttings successfully, but can't work competently in a team?*				

23. Are you aware of the 3 performance levels of the Key/Mayer competencies?	Y	N
24. If YES, What measures do you take to ensure that your assessment processes are pitched at the correct level?		
25. Do you provide information to learners about how GS will be taught and assessed in their training program?	Y	N
(If YES, ask for samples of such information)		
C. Recording, reporting, certification		
26. How are the results of assessment of GS recorded?	formally	informally
27. Please expand (*Ask for examples*)		
28. How are the results of assessment of GS reported?	formally	informally
29. Please expand		

30. Do GS appear on academic records?		Y	N
D. Valuing generic skills			
31. In your opinion, are generic skills important in your industry?			
(Encourage participant to expand on this and give reasons why)			
32. Are generic skills more important, of about the same importance or of less importance than technical skills in your industry?	more	about the same	less
33. *(Encourage participant to expand on this and give reasons why)*			
34. What do you think are the critical factors in the effective assessment of generic skills?			
E. Demographics			
Gender		M	F
Qualifications:			
Length of time teaching this TP:			
Length of time teaching:			
Thank you very much for your time and input to this survey.			

CENTRE UNDERTAKING RESEARCH IN VOCATIONAL EDUCATION

CANBERRA INSTITUTE OF TECHNOLOGY

And

ASSESSMENT CENTRE, UNIVERSITY OF BALLARAT

CONSENT FORM

Project title: **Assessing and certifying generic skills: What's happening in VET?**

Researcher's name: Berwyn Clayton

Tel: (02) 6207 4844

Fax: (02) 6207 3322

Email: berwyn.clayton@cit.act.edu.au

- I have read the Information Sheet, which outlines the nature and purpose of the research project. I understand and agree to take part.
- I understand that I may not directly benefit from taking part in the study.
- I understand that while information gained during the study may be published, I will not be identified and my personal details will remain confidential.
- I understand that I can withdraw from the study at any stage and that this will not affect my status now or in the future.
- I understand that my answers to the interview questions will be written down and/or taped.

Name of interviewee.....

Signed.....

Dated.....

I have explained the study to the interviewee and consider that he/she understands what is involved.

Researcher's signature and date.....

CENTRE UNDERTAKING RESEARCH IN VOCATIONAL EDUCATION

CANBERRA INSTITUTE OF TECHNOLOGY

And

ASSESSMENT CENTRE, UNIVERSITY OF BALLARAT

INFORMATION SHEET

Project Title **Assessing and certifying generic skills: What's happening in VET?**

Principal Researcher Berwyn Clayton

Tel. (02) 6207 4844

Fax (02) 6207 3322

Email berwyn.clayton@cit.act.edu.au

I am writing to ask you to participate in the above mentioned study. This research in being conducted by the Centre Undertaking Research in Vocational Education as part of the National Research and Evaluation Committee (NREC) research program.

The study is designed to provide data that will help answer questions about the approaches teachers/trainers in the VET sector are using for assessing, recording, reporting and certifying generic skills.

We would like to invite you to be a part of this study by participating in an interview at a time to be arranged which is convenient to you. The interview will take approximately 30-60 minutes.

During the interview we would like to address questions relating to:

1. Your general understanding of generic skills/key competencies
2. The role of generic skills in your particular Training Package
3. The methods you use to assess generic skills
4. Planning and information for assessment of generic skills
5. Your organisation's approach to recording, reporting and certifying generic skills
6. Your views on the value of teaching and assessing generic skills

To conclude the interview, we would like you to tell us about your views on the value of generic skills in your industry

All information collected during the interview that might identify you will remain confidential. Your answers will be written down to help with the collation of the research outcomes. All data collected for this study will be retained by the Centre Undertaking

Research in Vocational Education at Canberra Institute of Technology and will be stored for a period of seven years.

Information obtained as part of the interview will be published. However, at no time will you be identified and any personal details that you provide, during the course of your participation, will remain confidential.

Participation in the study is voluntary and you have the right to withdraw your consent at any time.

If you have any specific questions about the project please do not hesitate to contact me on the above number.

Thank you again for your interest and cooperation.

Berwyn Clayton

Centre Undertaking Research in Vocational Education

Canberra Institute of Technology, PO Box 826, Canberra 2601

PROJECT DESCRIPTION

Assessing and certifying generic skills: What's happening in VET?

This description created:	July 2001
Project no.	NR1008
Theme:	Generic Skills
Project type:	Research project (qualitative)
Project approach:	Case studies in 6 sites (training organisations and enterprises)
Time Frame:	August 2001–February 2002
Principal researcher/author:	Berwyn Clayton, Centre for Undertaking Research on Vocational Education (CURVE) Andrea Bateman, Ballarat Assessment Centre Kaaren Blom, CURVE Daye Meyers, CURVE Roger Ellyard, Roger Ellyard & Associates

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PROJECT PURPOSE/OBJECTIVES

It is the intention of this project to explore the extent to which generic skills are being embedded in training packages and accredited courses, and to then propose practical and applicable ways in which trainers and assessors can incorporate the assessment and certification of those skills into their assessment programs.

The objectives of the study are to:

- determine the critical elements of effective assessment of generic skills
- provide guidelines for the design of assessment tools and the recording, reporting and certification of generic skills
- provide guidelines for the development of strategies designed to maximise the validity of generic skills assessment.

RESEARCH QUESTIONS

Research questions to be addressed by this study include:

1. What factors are critical to effective assessment of generic skills?
2. What approaches to assessing, recording, reporting and certifying generic skills have been implemented by registered training organisations?
3. What strategies have leading-edge practitioners adopted in order to effectively assess generic skills?
4. Are generic skills embedded in assessments of unit(s) of competency?
5. What distinctions, if any, need to be drawn between Mayer's key competencies and 'generic skills/competencies'?
6. How and to what degree are assessors using the information pertaining to generic skills to inform assessments of the unit(s) of competency?
7. What is the level of understanding of the three levels of the key competencies as identified in training packages?

METHODOLOGY

Stage 1: Preparation

Conduct a desktop audit which involves:

- undertaking a review of the literature (Australian and overseas) to map the relationship between Mayer key competencies and other generic skills typologies
- searching training packages to identify those which specify training and assessment of generic skills
- locating registered training organisations and enterprises involved in delivery of training package qualifications which may be appropriate to case study sites

- searching websites for examples of best practice generic skills assessment
- selecting 6 case study sites (from 4 states and located both within training organisations and enterprises) according to the extent to which they represent a range of characteristics
- preparing interim report to NCVER covering the items above.
- developing case study protocol
- trialling survey instruments.

Stage 2: Data gathering

- Conduct 18–24 in-depth interviews (followed up by phone if necessary) with key personnel from selected 6 case study sites, including managers, trainers, assessors, and learners.
- Collect documentation of assessment guidelines and processes.

Stage 3: Analysis and report preparation

- Analyse site visit data and documentation.
- Prepare draft report and submission to reference group for comment/feedback.
- Prepare and submit final report, including detailed case studies, and executive summary to NCVER.

THE ORGANISATION

The Centre Undertaking Research in Vocational Education (CURVE) was established at the Canberra Institute of Technology (CIT) in 1999. Its establishment demonstrates Canberra Institute of Technology's commitment to VET research and recognises the institute's profile in educational research, which has been developed over the past 10 years.
The Canberra Institute of Technology has long supported research which underpins improvements in the quality of teaching and learning. The Centre Undertaking Research in Vocational Education has adopted this philosophy and concentrates on research into training delivery, with special emphasis on practice and practitioners.

The Centre Undertaking Research in Vocational Education's research team consists of practitioners who, in addition to having well-developed research skills, have direct experience of issues involved in the delivery of vocational education and training. Key areas of research have included assessment, flexible delivery, program evaluation, module non-completion and client satisfaction. Researchers from the Centre Undertaking Research in Vocational Education have been successful in obtaining funds from NCVER, ANTA and the Department of Education, Training and Youth Affairs.

Of particular relevance to this proposal is the centre's responsibility for addressing the Canberra Institute of Technology's needs for gathering and reporting against key quality measures to the Australian Capital Territory Government and ANTA. The Centre Undertaking Research in Vocational Education designs, conducts and reports on surveys into employer satisfaction, student opinion and customer service on an annual basis. As a result, staff of the centre have a strong understanding of quality requirements as they are embedded in current VET policy and practice.

Assessing and certifying generic skills

protocol for interviews

1. Numbers of interviews

- 24–26 interviews of VET practitioners and VET managers
- 7 interviews of industry personnel drawn from relevant national or state industry training advisory bodies

2. Types of interviewees

- limit to six program areas: drawn from museum, telecommunications (call centres); agriculture/horticulture; public service; metals and engineering (ship building); community services and health; tourism and hospitality. At least one assessment-only example to be included (South Australian generic)
- 2 to 3 interviewees in each of the case study sites (public, commercial, community, enterprise-based)
- one teaching/training practitioner and one middle manager in each program area
- approximately equal numbers of males and females
- some in the city and some in regional areas across New South Wales, Victoria, South Australia and the Australian Capital Territory.

3. Procedures

- Seek access from senior people in the organisations first.
- Make telephone contact with the interviewees.
- Fax/email out to the interviewees: information sheet, consent form, and list of questions (from the interview schedule itself).
- Consent form is to be handed/faxed back to the interviewer.

4. Interviews

- These can be either face-to-face or by telephone.
- Interviewers to make notes during (and after) each interview on the schedule.
- Interviews to be audio-taped so that a taped record is available for the interviewer in writing up after the interview.

Each interviewer to write up interviews in line with framework for interview schedule.

Appendix 2: Methodology

The project employed a qualitative methodology to address the research questions, adopting a case study approach to the investigation of six sites of generic skills assessment. This research method was chosen because 'case studies are the preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context' (Yin 1994). A multiple-case design was employed so that relationships between factors could be developed.

The aim of the research was to establish how generic skills are assessed within and outside endorsed unit(s) of competency and how they are individually being assessed within the VET sector. In addition, the research aimed to provide end users with effective and practical models of implementation that are compatible with competency-based assessment.

The size of the project was not amenable to a survey of the entire field, so it was not the intention of the report to document the state of play throughout Australia. Further, the project intended to build on research that had been recently (for example, Moy 1999) or was being currently conducted (for example, Kearns 2001) into the definitional status of generic skills, and to work in concert with the three other research teams exploring aspects of generic skills in this National Research and Evaluation Committee round.

Therefore, the first task of the desktop audit was to survey the literature in an effort to map the relationship between the Mayer key competencies and other generic skills typologies that have been articulated in the years since 1993, including those that are being adopted within the higher education sector in Australia, and within Britain, America, Canada and Europe. It was expected that certain questions would become apparent as an outcome of the literature review, and that the field of exploration would thus be narrowed down.

The second task of the desktop audit was to search training packages for those that specify the inclusion of training and assessment of generic skills, and then via the National Training Information Service (NTIS) to identify relevant registered training organisations and enterprises that are involved in the delivery of training package qualifications and accredited programs, and hence to begin to determine appropriate case study sites.

Third, websites such as *Spotlight on the provider* and *Framing the future* were searched for stories of best-practice generic skills assessment.

Finally, six sites were selected for in-depth examination, according to the extent to which they were representative of the following range of characteristics:

- show evidence of the valuing of generic skills
- are located across four states: New South Wales, the Australian Capital Territory, Victoria and South Australia
- are located within training organisations, and others which are located within enterprises
- conduct assessment only (for example, by accessing portfolios and establishing a breadth of evidence), and others which conduct both training and assessment
- deliver accredited training programs, and others which deliver training packages
- illustrate a range of Australian Qualifications Framework levels.

- illustrate a range of industry areas
- assess generic skills over time and across the whole of the teaching program, and others which assess generic skills at the unit of competency level
- make the teaching and assessment of generic skills explicit, and others which make them less explicit
- assess technical competence together with generic competence, and others which assess generic skills independently of vocational context
- are willing to make available a range of learning and assessment materials for document analysis
- have not previously been researched in depth.

Each prospective site had to be representative of several of the desired characteristics to qualify for inclusion. Accessibility to documentation and the willingness and availability of key stakeholders to participate were prime considerations.

Approval was then formally sought from each organisation and the case study protocol developed. This protocol, which was validated by both the Project Reference Group and NCVER, included the procedures and general rules that guided the researchers in their data collection. The protocol also clarified the case study questions, issues of confidentiality and the potential sources of information within each organisation.

Details of the information requirements and case study questions were then prepared and forwarded to key personnel in the selected case study sites. Formal permission was requested from participants and their organisations before dates for researcher visits were agreed. At each site, in-depth interviews were held with key personnel, including managers, trainers, assessors and learners, to document their perspectives on the research questions. A total of 27 interviews were conducted over one or two days at each site in this phase of the study, and were supplemented by telephone interviews where necessary. After transcription of the recorded interview data, draft site reports were submitted to the participants for verification.

Analysis of the verified site report, documentation and assessment approaches was then carried out. The information from all sites was then synthesised to identify matching patterns and independent innovations across the participating organisations.

As expected, cross-case analysis revealed commonalities in approach and rationale, and pointed to unique instances of best practice. The resulting set of principles or best practice guidelines for the assessment and certification of generic skills that form the concluding section of the report were informed by these observations, and are addressed to Australian VET providers and policy-makers.

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Appendix 3: Results of desktop audit of training packages

Training Package	Example of generic skills included as discrete units of competency	Example of generic skills embedded within vocational units of competency
Business Services	Organise workplace information (KC 1)	Unit of competency: Co-ordinate business resources
		Element of competency: Monitor and report on resource usage (KC 2)
Retail	Communicate in the workplace (KC 2)	Unit of competency: Apply retail office procedures
		Element of competency: Prepare simple correspondence (KC 2)
Tourism	Work with colleagues and customers (KC 4)	Unit of competency: Organise functions
		Performance criteria: Information is passed to all appropriate colleagues to ensure effective planning of function elements (KC 3)
Horticulture	Plan daily work routines (KC 3)	Unit of competency: Conduct vegetation surveys
		Element of competency: Compile a vegetation assessment report (KC 2)
Assessment & Workplace Training	Plan assessment (KC 3)	Unit of competency: Conduct assessment
		Element of competency: Organise assessment (KC 3)
Hospitality Industry	Work with colleagues and customers (KC 4)	Unit of competency: Perform clerical procedures
		Element of competency: Draft simple correspondence (KC 2)
Community Services (Children's Services sector)	Communicate with children (KC 2)	Unit of competency: Fulfil family day care administration requirements
		Element of competency: Design and distribute information to parents (KC 1&2)
National modules mapped to Electrotechnology TP	Estimate projects (KC 5)	Unit of competency: Supply projects
		Element of competency: Plan and prepare to supply projects (KC 3)
Telecommunications (Call Centres sector)	Use telecommunications technology in receiving and making calls in the call centre environment (KC 7)	Unit of competency: Conduct data collection for market research, opinion polls, customer surveying
		Element of competency: Plan data collection for research/survey (KC 1&3)

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Appendix 4: Generic skills identified by informants

Organisation	Generic skills identified			
Centrelink	ability to read complex documents and correctly interpret their meaning		ability to relate current understanding to a different environment	
	business knowledge	cultural awareness	customer service skills	ethics & integrity
	management skills	leadership	innovativeness	motivational skills
	organisation of own work	personal qualities	punctuality	respecting diversity
	respecting the opinions of others	self-management	stress management	telephone skills
	time-management skills	training skills	understanding systems	values and attitudes
CCAE	adult learning principles	attitudes and values	business orientation	confidence and self-esteem
	cultural awareness	customer service skills	management of information	ethics and integrity
	manners and etiquette	own learning and performance	personal qualities	practicality
	promotional skills	telephone skills	understanding how people relate	work ethic
Burnley College	attitudes and values	costing and estimating	ethics and integrity	financial planning
	first aid	personal qualities	punctuality	reliability
	report writing	work ethic		
ACT senior secondary colleges	administration skills	attitudes and values	awareness of the industrial issues	creativity
	cultural awareness	hygiene	initiative	innovativeness
	interpersonal skills	leadership	meeting deadlines	merchandising
	occupational health & safety	personal presentation	punctuality	reliability
	responsibility	time management	work ethic	
Torrens Valley TAFE	attitudes and values	personal presentation	self management	time management skills
Spencer Institute of TAFE	customer service	punctuality	reliability	confidentiality
	initiative	self-evaluation	organisational skills	

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Appendix 5: Mayer's three levels

- Level 1 describes the competence needed to undertake activities efficiently and with sufficient self-management to meet the explicit requirements of the activity and to make judgements about quality of outcome against established criteria
- Level 2 describes the competence needed to manage activities requiring the selection, application and integration of a number of elements, and to select from established criteria to judge quality of process and outcome
- Level 3 describes the competence needed to evaluate and reshape processes, to establish and use principles in order to determine appropriate ways of approaching activities, and to establish criteria for judging quality of process and outcome (Mayer 1992).

Appendix 6: Centrelink mapping approach

An example of the mapping approach follows.

		Click to Main Menu	Performance Criteria										Dims of Competence					Key competencies							PC	Dim	KC	total	Learning/Assessment Activities		
			1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	UP	tsk	mgt	con	l/r	tran	1	2	3	4	5	6	7					1	2	3
		BSBCMN304A : Contribute to personal skill development and learning																													
																		Collecting/analysing	Communicating	Planning/organising	Working with teams	using math	Solving problems	Using technology	Count Totals for S&K's List						
counts to S&K's checklist only			8	7	12	10	7	8	6	1	4	10	11	6	4	13	8	#	17	13	15	1	7	6					E1	E2	E3
		Click to Main Menu	Performance Criteria										Dim's of Competence					Key Competencies							PC	Dim	KC	total	Learning/Assessment Activities		
			1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	UP	tsk	mgt	cont	1/r	tran	1	2	3	4	5	6	7					1	2	3
		Skills and Knowledge (S&K's)																													
		THINGS I KNOW	3	2	6	5	2	2	4	2	1	9	7	2	1	7	5	#	5	4	6	1	2	3	36	22	32	90	0	0	0
know	0.00	K1. My preferred learning style				x						x					x	x							2	1	1	4	0	1	0
know	0.00	K2. How to interpret my job role	x									x				x	x	x							2	2	1	5	1	0	0
know	0.00	K3. How to self assess my comp	x										x				x	x							1	2	1	4	1	0	0
know	0.00	K4. How my individual learning	x	x	x	x						x				x		x	x		x		x	x	5	1	5	11	3	1	0
know	0.00	K5. How my LP relates to my learn Business Plan				x	x					x				x		x							3	1	1	5	0	2	0
know	0.00	K6. How to identify my learning and develop			x	x		x	x	x			x					x	x		x				5	1	3	9	1	2	2
know	0.00	K7. How to analyse feedback to determine my own development						x	x			x	x				x	x	x	x	x				3	2	5	10	0	1	1
know	0.00	K8. How to prioritise my learning and development			x				x				x	x						x					2	2	1	5	1	0	1
know	0.00	K9 How to effectively implement an individual																													
know	0.00	K10. What learning options are available to			x	x						x				x		x						x	3	1	2	6	1	1	0
know	0.00	K11. How to access the range of learning opt			x							x	x			x	x		x	x				x	2	3	3	8	1	0	0
know	0.00	K12. Appropriate methods for giving and receiving feedback						x				x	x			x		x	x		x				2	2	3	7	0	0	1
know	0.00	K13. The Centrelink shared behaviours		x						x		x				x		x	x		x				3	1	3	7	1	0	1
																									0	0	0	0	0	0	0
																									0	0	0	0	0	0	0
Access		I CAN ACCESS INFO ON	1	1	1	2	0	0	0	1	0	8	2	0	0	4	0	0	0	0	0	0	0	1	14	6	1	21	0	0	0
Access	0.00	A1. My Area Business Improvement Plan (BIP)										x				x									1	1	0	2			
Access	0.00	A2. My workplace Business Improvement Plan										x				x									1	1	0	2	0	0	0
Access	0.00	A3. The Centrelink Team and Individual		x	x							x				x									3	1	0	4	2	0	0
Access	0.00	A4. Business and quality standard	x									x				x									2	1	0	3	1	0	0
Access	0.00	A5. My Area Learning Calendar of activities				x						x	x												2	1	0	3	0	1	0
Access	0.00	A6. Centrelink Education Network				x						x	x												2	1	1	4	0	1	0
Access	0.00	A7. Learning in Centrelink										x											x		1	0	0	1	0	0	0
Access	0.00	A8. Centrelink's Performance Assessment Process							x			x													2	0	0	2	0	0	1
																									0	0	0	0	0	0	0
Do		THINGS I DO	4	4	5			3	4	3	3	1	2	4	3	2	3	8	11	9	9	0	5	2	35	14	44	93	0	0	0
Do	0.00	11. Regularly assess my own cor	x										x			x		x							1	2	1	4	1	0	0
Do	0.00	12. Identify my current and future	x					x	x				x					x	x						3	1	2	6	1	1	1
Do	0.00	13. Actively participate in the dev	x	x						x				x				x	x	x	x		x	x	3	1	6	10	2	0	1
Do	0.00	14. Regularly review my ILP in consultation with my learn leader, and							x	x					x				x	x	x		x		2	1	4	7	0	0	2
Do	0.00	15. Use feedback from colleagues and customers to identify development							x									x	x		x				1	0	3	4	0	0	1

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